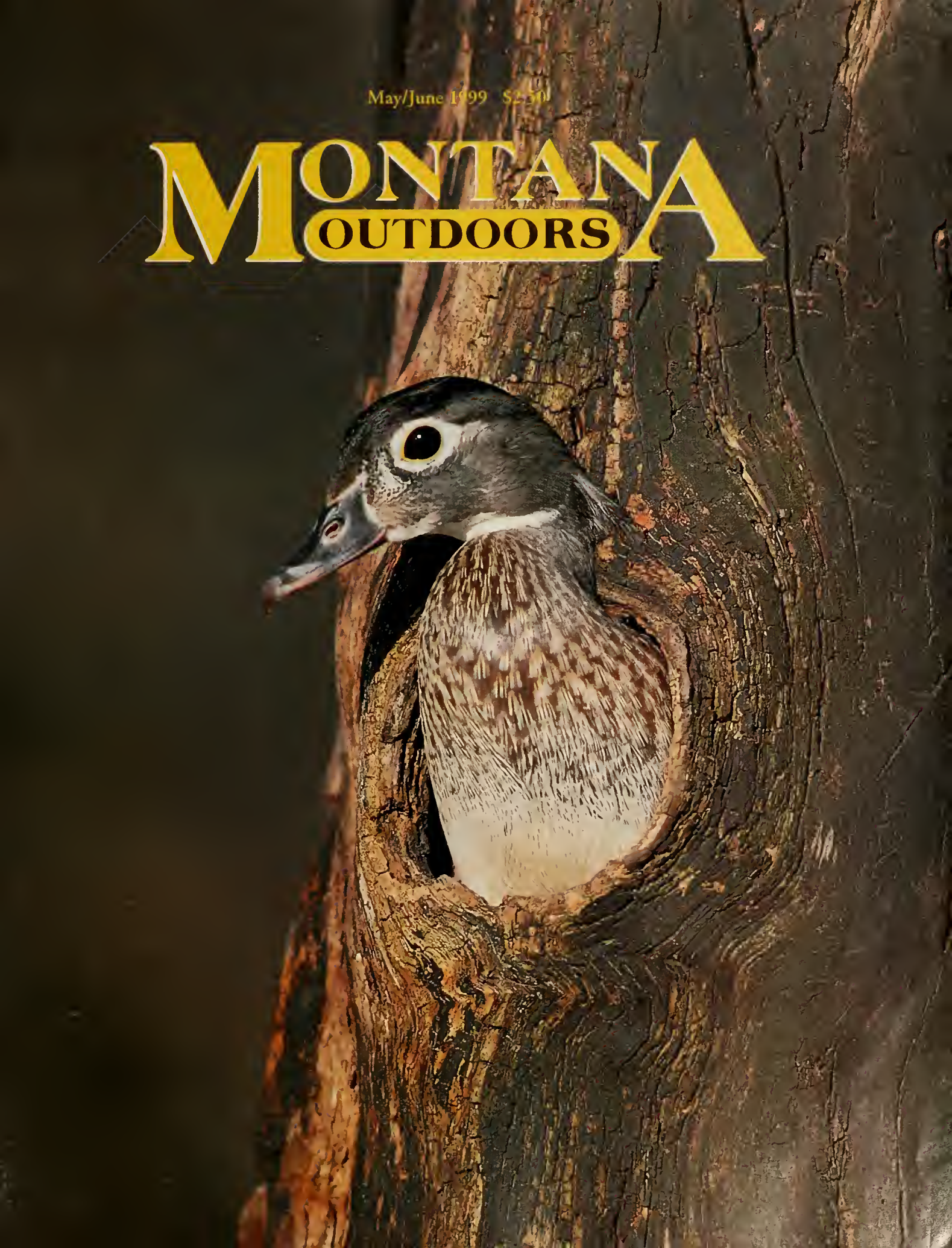
May/June 1999 $2.50

MONTANA OUTDOORS



Our Point of View

Thundering hooves pounded the earth with such force that the prairie danced. Shaggy bison poured over the hill toward the river. Suddenly, the hill was gone. Crashing one onto another in the rocks below, these bison came eye to eye with warrior hunters.

This scene recurred every year at hundreds of sites in Montana for more than a thousand years. The buffalo jump was a gathering place where food was replenished and buffalo provided tepees, clothing, tools, and utensils. Sites like the one at Ulm Pishkun State Park were used by several Indian nations from 500 to 1500 A.D.

An educational center has recently been built below the jump (page 24). Three words guided us in constructing this facility: *honor* to the people who used and remain attached to this site, *respect* for the land and its cultural importance, and *commitment* to protect cultural values and remain faithful to preserving the many stories woven into the site's oral history.

Ulm Pishkun is a bridge between different cultures over common land. Come help us celebrate the grand opening of the visitor center on June 5.

From Ulm Pishkun you can see to the west where the great plains crashed into the rocky mountains, leaving ridgeline after ridgeline of rugged peaks. Here many animals that roam the wild high country in summer must seek refuge from deep snow in winter. Windblown winter ranges provide an opportunity for elk, deer, and many other wild animals to survive and breed. Elk move 20 miles or more across and down the ridges of the Bob Marshall Wilderness to the south slopes of places like the Blackfoot-Clearwater Wildlife Management Area.

Conserving this winter range began with a land purchase 50 years ago—one of the earliest in the nation. Those who have come to know the great value of the Blackfoot-Clearwater have planned an event on June 12 to celebrate the gift we have received and to lay out a challenge for this generation to secure the heart of the game range for the next generation (page 15).

Come help us celebrate or consider what you could do to maintain this bridge between different seasons over common land.

Pat

Patrick J. Graham
Director
Montana Fish, Wildlife & Parks

STEVEN AKRE

DUSAN SMIT/FWP

Walleye are now firmly established in Canyon Ferry Reservoir (p. 2).

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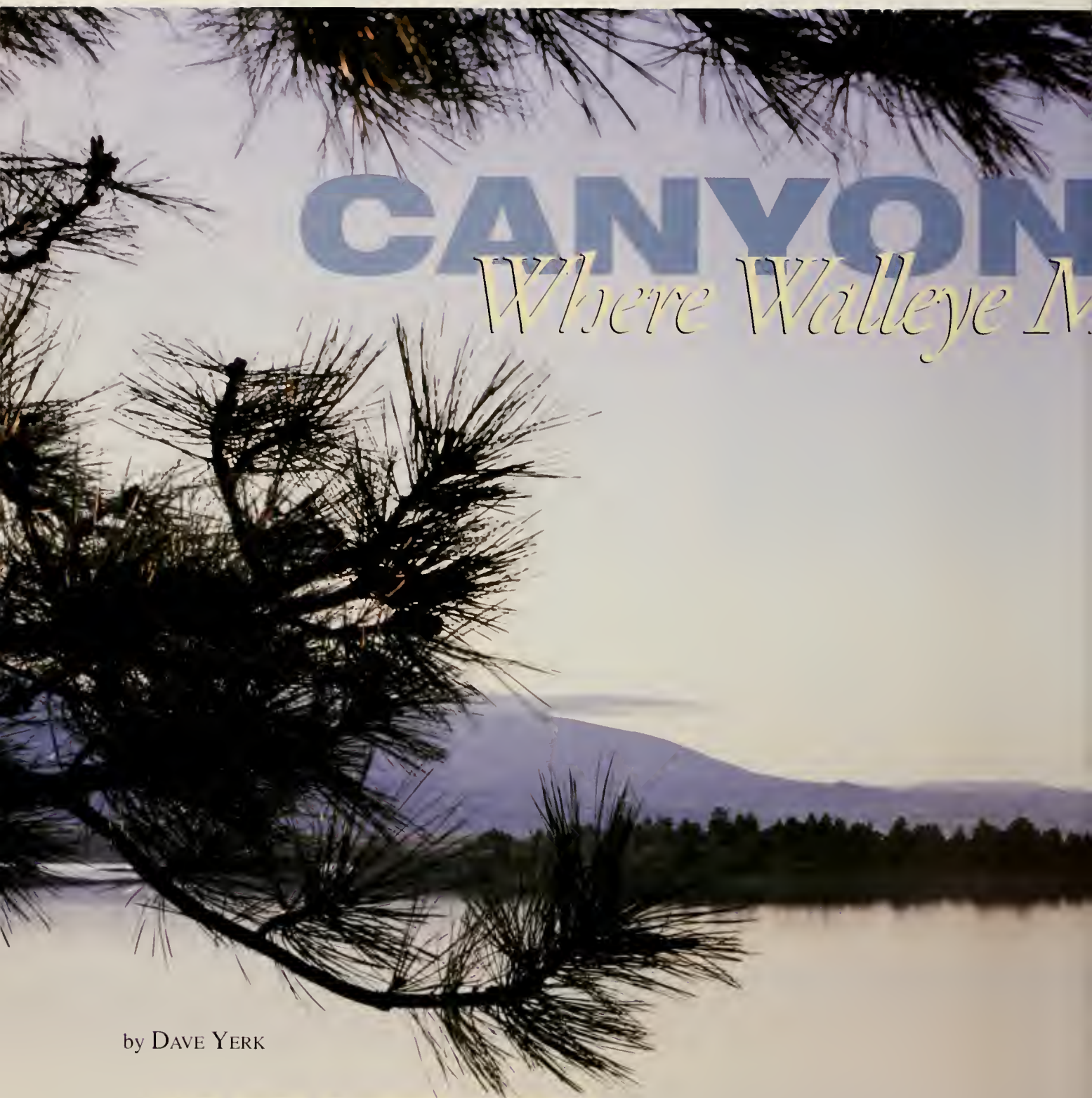


CANYON
Where Walleye M

by Dave Yerk

LET'S FACE IT—WHEN ANGLERS think of cold, clear rivers originating high in the mountains of western Montana, they think of trout. It's traditional. Trout have always been in these waters. Many popular "warm-water" fish species pursued by Montanans today—bluegill, crappie, perch, bass, and walleye—have not. For the most part, these fish prosper in the warmer, slower waters of eastern and central Montana, although there are many exceptions. But where dams and reservoirs have altered habitat conditions of some traditional trout waters, the stage is set for change—and conflict.

GEORGE WUERTHNER

FERRY

et the Rockies

DUANE SMITH

Nowhere is this clearer than at Canyon Ferry Reservoir southeast of Helena, where change is bumping up against tradition. For decades this popular, heavily fished lake has offered a consistent menu of fast-growing, husky trout in summer and abundant perch for ice fishermen. But recently the walleye, a top-of-the-food-chain predator, has gained a foothold in the reservoir, and there is much uncertainty about what the future holds. As fish managers, biologists, and interested anglers begin preparing a new 10-year fisheries management plan for Canyon Ferry, Hauser, and Holter reservoirs, they must wrestle not only with biological issues, but complex social issues as well.

Impounded in 1954, Canyon Ferry is the largest and uppermost of a three-reservoir chain on the upper Missouri River near Helena. The U.S. Bureau of Reclamation manages the reservoir's water level for several uses, including flood control, power production, irrigation, municipal water supply, and recreation. Because Canyon Ferry is a water storage reservoir, it regulates the flow of the two lower reservoirs, Hauser and Holter, and the blue ribbon stretch of the Missouri River below Holter Dam. Hauser and Holter are much smaller than Canyon Ferry and are "run-of-the-river" reservoirs, meaning they do not have water storage capabilities and their water levels rarely fluctuate.

The reservoir complex and accompanying river sections are important angling destinations. Based on Montana Fish, Wildlife & Parks (FWP) fishing pressure estimates, Canyon Ferry consistently ranks as one of Montana's most popular fisheries, supporting 90,000 to 100,000 angler days a year. Hauser and Holter also rank in the top 10 waters for statewide fishing pressure, each providing about 70,000 angler days annually. The Missouri River immediately below Holter Dam is one of the most heavily fished river stretches in Montana, second only to the Bighorn. Combined, this reservoir/river complex accounted for 11 percent of the total statewide fishing pressure in 1997.

Historically, Canyon Ferry has been managed as a rainbow trout and yellow perch fishery. Because there are few suitable spawning tributaries, annual hatchery plants sustain the trout fishery. The planted rainbows grow rapidly in the reservoir's highly productive waters, averaging 18 inches by their second year. Yellow perch reproduce naturally and are a mainstay of a popular ice fishery.

Hauser and Holter reservoirs are managed primarily for rainbow trout, kokanee salmon, yellow perch, and walleye. Rainbows are stocked annually in both reservoirs, although there is a notable wild (naturally reproducing) component in the Holter population. Kokanee, perch, and walleye recruit naturally in both reservoirs, but their numbers fluctuate due to flushing losses during high water years. In Hauser, hatchery plants have been used to offset these losses—5,000 walleye fingerlings have been stocked each year since 1989, and kokanee have been stocked annually since 1997.

Holter Reservoir is unique in that it supports an excellent rainbow trout, kokanee, and yellow perch fishery in the presence of a trophy walleye fishery. Walleye have been in Holter for over 40 years, most likely originating from a hatchery plant made in Lake Helena in 1951. Because of the relatively short retention time of water in Holter, it is suspected that flushing losses of both fry and adults have limited the walleye population. At relatively low densities, this population produces trophy-sized walleye without negatively affecting the other fish species through predation or competition. Thus, Holter anglers enjoy a multi-species fishery with a trophy component—the best of both worlds.

THE PAST

In the late 1980s, rainbow trout fishing had declined in Canyon Ferry; this, plus growing angler interest in diversifying the Canyon Ferry fishery, prompted FWP to develop a fisheries management plan for the reservoir. At public scoping meetings, anglers expressed interest in the introduction of several non-native species, most notably walleye. This interest in walleye was not a recent development; some anglers had been urging FWP to establish a walleye fishery in Canyon Ferry since the early 1980s.

Because the walleye is a top predator and very prolific in the right

Right: *Hauser (pictured here) and Holter reservoirs each provide about 70,000 angler days of fishing annually.*

Opposite page: *Canyon Ferry, the uppermost reservoir in the chain, historically has been managed as a rainbow trout and yellow perch fishery.*

PAUL UPDIKE

NEAL & MARY JANE MISHLER

habitat conditions, we took measures to fully evaluate a potential introduction during the planning process. In 1991, we hosted a public workshop investigating walleye-trout interactions. Biologists from several western states described their experiences in managing coexisting trout and walleye fisheries. Their observations reflected two consistent themes: at high population levels, walleye predation negatively affected trout and other fisheries; and because they are very mobile, walleyes pioneered into upstream and downstream waters, sometimes moving great distances.

To further explore these issues, in 1992 Dr. Tom McMahon, a fisheries researcher from Montana State University, completed an environmental assessment specifically evaluating the potential impacts of walleye on the existing Canyon Ferry fishery as well as on upstream and downstream waters. After reviewing existing data and other case histories, he concluded: (1) conditions are highly favorable for development of a self-sustaining walleye population in Canyon Ferry; (2) this population would likely "boom and bust"—meaning it would expand very quickly, but then decrease in quality as the existing forage base declines; (3) a sizable walleye population would not be compatible with maintaining the existing rainbow trout and yellow perch fisheries; and (4) walleye would move into adjacent waters, especially downstream during high water years when surface spills occur at Canyon Ferry Dam.

Finally, FWP sent out approximately 4,800 surveys to identify the public's opinions and preferences concerning Canyon Ferry fisheries issues. The majority (77 percent) of the 1,830 respondents indicated they preferred maintaining the existing rainbow trout and yellow perch fishery and generally opposed a walleye introduction, particularly if it were to pose a high risk to the existing fishery.

Following two years of preparation and extensive public involvement and review, the final draft of the Canyon Ferry Reservoir/Missouri River Fisheries Management Plan was presented to the FWP Commission in October of 1992. The five-year plan (1993-1998) recommended that no new species be introduced into the reservoir and that efforts be directed at enhancing existing fish species and their habitats in the reservoir/river system. The plan included these specific objectives: "wild" strains of rainbow trout would be stocked in an attempt to increase natural reproduction and improve fishing quality; brown trout numbers would be enhanced for an improved trophy component in the fishery; and efforts would be stepped up to better understand yellow perch population dynamics. The commission unanimously approved the plan.

Ironically, at the very time a potential walleye introduction was being evaluated during the planning process, a population was quietly developing in Canyon Ferry. While gill netting to monitor rainbow trout trends during fall of 1989, FWP biologists caught their first walleye in 34 years of systematic fish sampling in Canyon Ferry. We also netted a single walleye in each of the following years—a young-of-year was taken in a seine in 1990 and a yearling in a gill net in 1991. In 1992, three walleye were caught in gill nets; the oldest was 3 years old. At that time, the status of walleye in Canyon Ferry, based on these few incidental catches, was unclear. However, because of the potential risks to the existing fishery identified in Dr. McMahon's assessment, the management plan addressed establishment of new, undesired species as follows:

> Should illegally introduced species become established in

Canyon Ferry Reservoir or the Missouri River, FWP will take immediate action to determine the status of the population and evaluate the possible consequences to existing fisheries...[and] as determined necessary...utilize removal methods or reservoir level manipulations to minimize impacts of illegally introduced fish species on resident populations.

To further investigate the presence of walleye in Canyon Ferry, in June of 1993 we set nets specifically targeting them. Fourteen walleye were sampled in seven nets; all were less than 4 years old. It was evident that a walleye population was developing.

To address the mandate in the management plan, we collaborated with the Montana Cooperative Fisheries Research Unit at Montana State University in Bozeman to conduct a study to determine the status of walleye and investigate their habitat use. Gill nets set for walleye as well as FWP's standardized netting series were used to collect basic population information from 1994 through 1996. A total of 470 walleye were sampled during the study, ranging in age from young-of-year to 15 years old. Age and growth analyses indicated walleye had been reproducing in Canyon Ferry since at least 1985.

Walleye sampled during the study showed some of the fastest growth rates observed in North American walleye stocks. Two-year-olds averaged 17.4 inches in length in late fall. This impressive growth can be partly explained by understanding that this low density population was preying on a relatively unexploited forage base—i.e., walleye did not have to search too long or hard for their next meal. Suckers and yellow perch were the primary prey species.

We used telemetry to monitor seasonal movements of adult walleye and to identify spawning areas. Because the spring spawning season is the only time of year when walleye are highly concentrated, it was critical to identify these areas so that population control measures could be implemented. We surgically implanted ultrasonic transmitters into 38 adult walleye during the study, and located these fish weekly throughout most of the year.

Seasonal movements and habitat use of these walleye were consistent in all three years of the study. Generally, the fish occupied the south end of the reservoir during spring and summer, then migrated north in early fall. After remaining in the north (dam) end during the fall months, they eventually migrated back south by the following spring, often completing the 25-mile migration under the ice during winter. All instrumented walleye returned to a single spawning area on the south end of the reservoir in the spring of 1995 and 1996. To confirm this site as the only spawning area, other areas of the reservoir with suitable spawning habitat were sampled for adult walleye in 1995 and 1996—none were found.

A final component of the research project was evaluation of different sampling equipment for effectiveness in sampling spawning walleye while minimizing catch of other species. This was particularly important because large numbers of rainbow trout cruised the shallow shoreline areas at the same time walleye were spawning. After testing gill nets with different mesh sizes, trap nets, and electrofishing techniques, we found that three-inch mesh gill nets effectively sampled spawning walleye while minimizing incidental catch of rainbows.

Equipped with the data and techniques provided by the research project, we set gill nets on the spawning area in spring of 1997 to remove walleye from Canyon Ferry as mandated by the management plan. Of 303 walleye captured, 209 (70 percent) were transported and released into Hauser and Holter reservoirs. However, when three very large (over 19 pounds) walleye died in the nets, opposition to

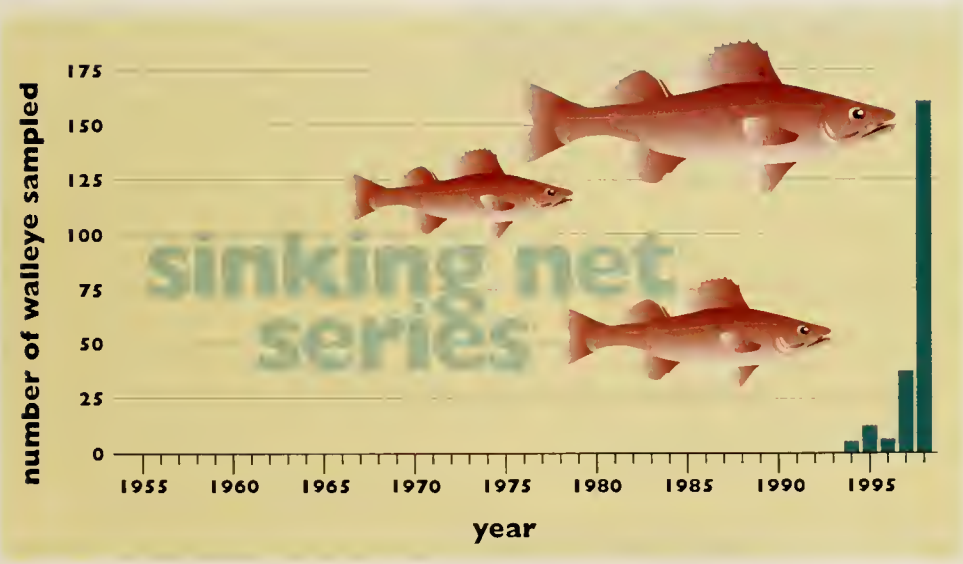
DAVE SERK

the control efforts escalated.

Walleye were much more abundant in Canyon Ferry than biologists anticipated. While only a few turned up in the nets in 1994 when the study began, by 1996 it was routine. This can be partly attributed to increased sampling efficiency, but walleye were unquestionably increasing. They began to appear commonly in all of our standardized netting surveys during this period, and walleye were checked in FWP angler creel surveys on Canyon Ferry for the first time in 1996.

BRAD FLICKINGER

Above and opposite: *To determine movement patterns of walleye in Canyon Ferry, FWP biologists surgically implanted ultrasonic transmitters in 38 fish and tracked them over a 3-year period.*



FWP has periodically conducted standardized sinking net surveys in Canyon Ferry since 1955. Walleye first appeared in these nets in 1994, then increased dramatically in 1998.

It is important to note that these standardized netting series were designed to monitor other species and were not necessarily sampling preferred walleye habitat. Because of this, we initiated an additional fall netting series in 1996 to specifically monitor the walleye population. The number of walleye sampled in these nets increased from 32 in 1996 to 131 in 1997, more than a fourfold increase. Of greater significance, 80 percent of the walleye netted in 1997 were yearlings produced in 1996. The boom had begun.

THE PRESENT

The five-year Canyon Ferry management plan expired at the end of 1997. Because of the controversy surrounding the walleye issue and the impending changes in the Canyon Ferry fishery, managers had already begun working on a new management plan, this time including Hauser and Holter reservoirs. Initial public scoping began in 1998 when FWP asked the Montana Consensus Council to form a working group representing different interests on the reservoir system. The work group was charged with identifying important issues and providing direction to FWP in addressing these issues. In its final report, the working group summarized the management objective of the new plan as follows: "The fisheries management goal for this three-reservoir system should be to manage a high quality, cost-effective, multi-species fishery with high levels of angler satisfaction."

Managers are drafting a new plan at a challenging time—walleye numbers are increasing in all three reservoirs. In 1998, gill net catch rates in Canyon Ferry exceeded those observed in other noted Montana walleye fisheries like Lake Frances, Fort Peck, Tiber, and Bynum reservoirs. The net catch was dominated by young walleye produced in 1996 and 1997. Also in 1998, anglers began catching significant numbers of walleye for the first time. Two-year-old walleye produced in 1996 were the most common game species checked in the creel by August of 1998.

Hauser and Holter reservoirs showed

a similar trend. Following back-to-back good water years in 1996 and 1997, record numbers of walleye appeared in Hauser Reservoir netting and creel surveys in 1998. Anglers also reported record catches of smaller walleye in Holter Reservoir last summer. These walleye are the same age as those dominating the Canyon Ferry population and likely flushed from the upper reservoir.

The recent increase in the number of walleye observed in the reservoir system makes it difficult to predict what changes may occur in the Canyon Ferry, Hauser, and Holter fisheries over the life of the new 10-year plan. Because of this, the plan will be "adaptive"—meaning it will be flexible and enable fish managers to respond to changing conditions within each reservoir. Accordingly, during the course of the 10-year plan, FWP will host annual meetings to present the most recent sampling results and population trend information for all three reservoirs. These public meetings will provide a forum to discuss current and future management actions as they relate to the objectives of the plan.

Understanding that the principal objective is to provide a "multi-species fishery with high levels of angler satisfaction," this plan will attempt to provide strategies to maintain the diversity of angling opportunities that the public has traditionally enjoyed on these reservoirs. Additionally, this plan will serve to define the costs (both monetary and biological) associated with different management scenarios that may develop.

THE FUTURE

The population level that walleye achieve in Canyon Ferry will likely dictate management options for the entire reservoir system in the new management plan. Although we can only guess at the ultimate level, we know the current walleye population in Canyon Ferry was produced by a relatively small number of adults. This population has already attained a density higher than most of Montana's established walleye fisheries, and its reproductive potential is far from being realized. When female walleye from the strong 1996 year class reach spawning age in the year 2001 (most female walleye in Canyon Ferry mature sexually at age 5, males at age 3), walleye have the potential to take over the Canyon Ferry fishery. However, it is unknown at this time if forage limitations, environmental conditions, or other factors may ultimately limit their expansion.

DUSAN SMETANA

Walleye are now a major component of the Canyon Ferry fishery, and could increase significantly when females from the 1996 year class reach spawning age in 2001.

Based on current trends, walleye will become a major component of the Canyon Ferry fishery in the next couple of years. These fish are going to be big, plentiful, and popular with anglers. Rainbow trout and yellow perch will also continue to provide quality angling opportunities on the reservoir. But will this diverse fishery be sustainable?

The answer will depend on walleye abundance. At relatively low walleye densities, anglers can expect good fishing for all three species. However, at high walleye densities, managers will be challenged to identify cost-effective and socially acceptable tools for limiting the walleye population. Maintaining a multi-species fishery will become difficult if walleye numbers are left unchecked.

Anglers must recognize that although walleye will provide a new angling opportunity on Canyon Ferry, there are risks. Because managers may be forced to stock larger rainbows in Canyon Ferry and larger kokanee in Hauser to minimize predation losses, hatchery costs could become prohibitive. The popular yellow perch winter fishery on Canyon Ferry may be adversely affected, since walleye prey heavily on perch. Trophy-sized walleye in Holter might decline if greater walleye numbers result in increased competition. Some anglers may request forage fish introductions if the existing prey base is depleted and condition of walleye begins to decline. Because forage fish feed on the zooplankton that are the mainstay of rainbow trout, kokanee, and yellow perch diets, these fisheries could be compromised as more competitors are thrown into the mix. These are just a few of the potential trade-offs we must all consider.

So, whether you love 'em, hate 'em, or are somewhere in between, walleye are now firmly established in Canyon Ferry, a traditional bastion of rainbow trout. The direction the fishery takes over the next decade—and there are several possible scenarios—will depend in part on natural processes and in part on how the social issues are resolved. There are still decisions to be made, and some tough ones at that. We encourage all interested anglers to participate in defining the future of Canyon Ferry, Hauser, and Holter reservoirs this summer and fall during FWP's completion of the 10-year plan. ■

Dabblers and Divers

Lesser scaup pair

photography by W. Steve Sherman

Each spring, legions of ducks pass through Montana on their way north. Many of them like what they see in Big Sky Country, and stop here to nest and raise their young. Northeastern Montana, with its wealth of ponds and sloughs formed when retreating glaciers left chunks of ice buried in the prairie some 10,000 years ago, is the state's richest duck-producing area. But marshes, ponds, reservoirs, streams, and rivers in other parts of Montana provide excellent habitat as well.

Twenty species of ducks nest regularly in Montana, from the widely distributed mallard to the reclusive hooded merganser, a small duck that seeks wooded areas near water. About half of these species are known as

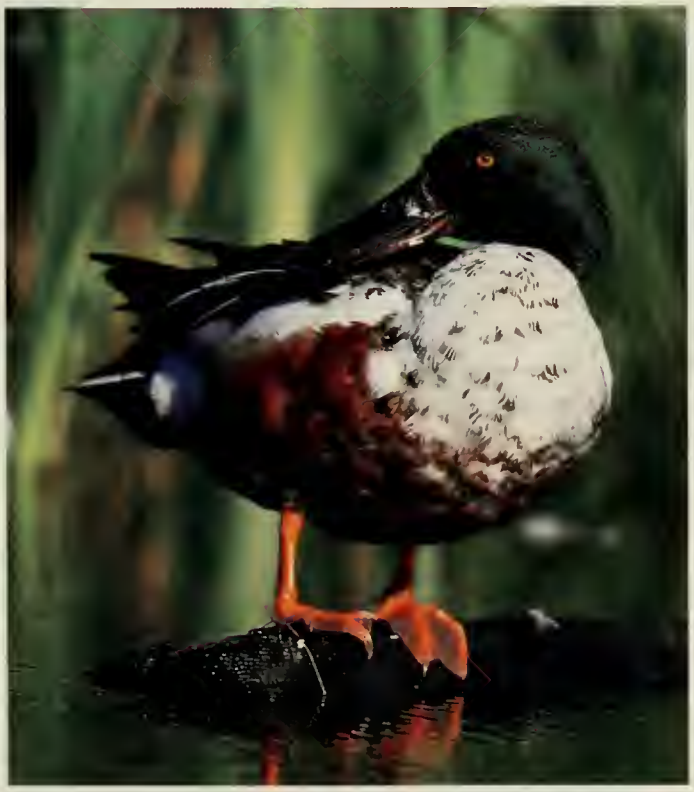
"dabblers"—ducks that feed primarily in shallow water by tipping up. Because the feet of dabblers are positioned forward, they are adept at walking and sometimes feed in grainfields. In the water, these ducks float high and spring straight upward when taking flight. Mallards, pintails, gadwalls, teal, shovelers, and American wigeon are all dabbling ducks.

The other duck species are referred to as "divers" because they frequent deeper water and dive for underwater vegetation and bottom invertebrates. They float lower in the water and appear to run across the surface when getting airborne. Their feet are positioned farther back, giving them greater diving efficiency but making them clumsy on land. Included in this group

Male cinnamon teal

Teal are small, fast-flying ducks that seek shallow ponds for feeding and adjacent uplands for nesting. Three species breed in Montana: blue-winged, green-winged, and cinnamon.

Wood duck hen and ducklings



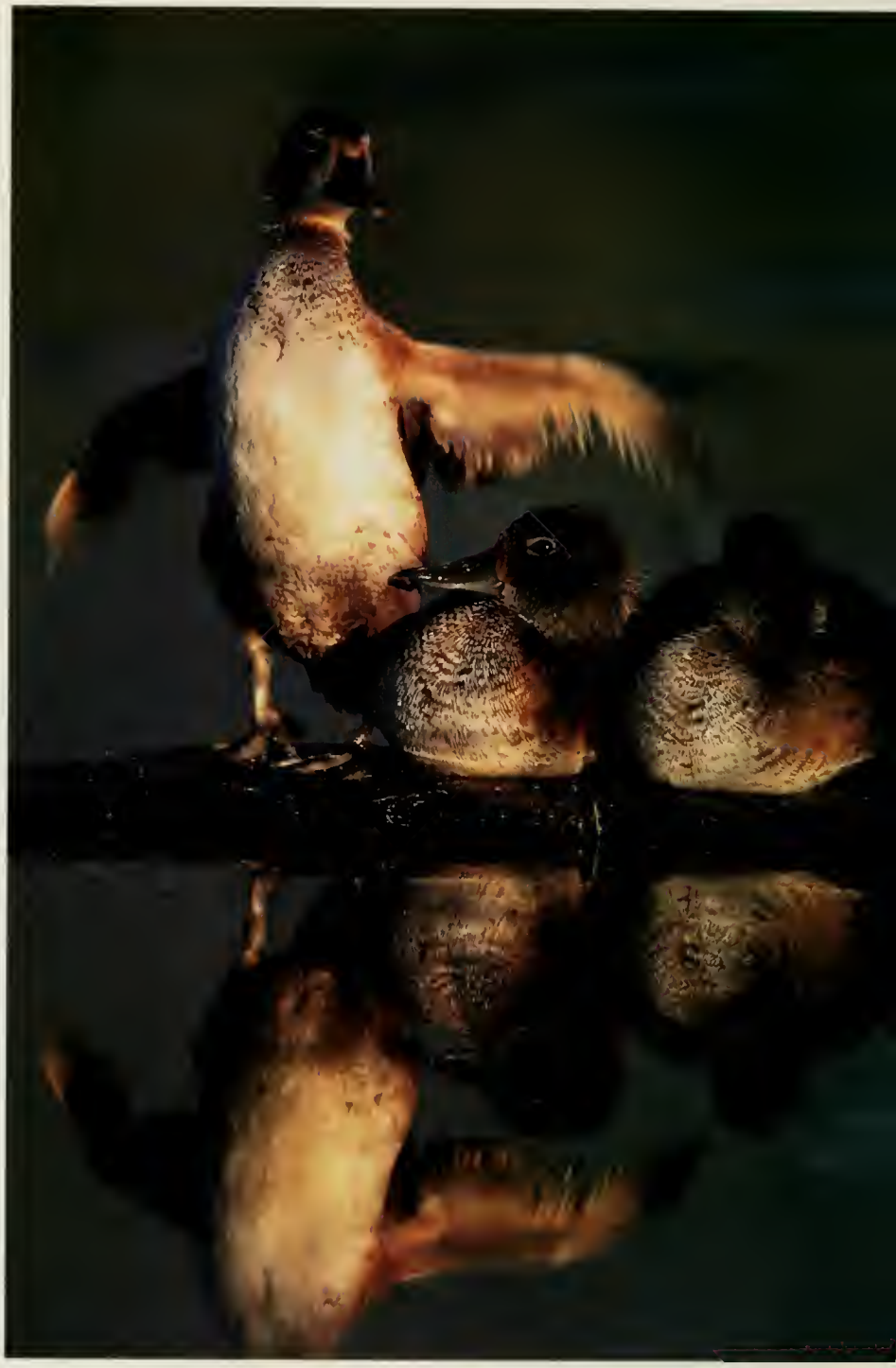
Male northern shoveler

Above: Because they nest in tree cavities well above the ground, wood ducks prefer marshes or river backwaters with cottonwoods and willows nearby.

Left: The northern shoveler, or "spoonbill," uses its wide, spatulate bill to strain plankton and invertebrates from water and mud.

are redheads, scaup, canvasbacks, goldeneyes, ring-necks, harlequins, mergansers, and others. When alarmed, divers can swim great distances underwater, barely emerging before they dive again.

Identifying ducks in spring, especially the more colorful males, is easy to do with the help of binoculars and a good field guide. By mid-summer identification becomes more difficult, since adults molt their feathers, become flightless for several weeks, and sport drab "eclipse" or hiding plumage. Ducks of most species regain their brighter breeding plumage by mid to late fall.



Juvenile lesser scaup

Often called "bluebills," lesser scaup nest primarily in prairie marshes and potholes. These medium-sized ducks dive for their food, often to considerable depths, and feed on plants, snails, crustaceans, and insects.

Male redhead

Male hooded merganser

Above: *Redheads feed in shallower water than most diving ducks and prefer aquatic plants over animal matter. Hens may lay some or all of their eggs in the nests of other species, a trait known as "nest parasitism."*

Left: *The hooded merganser's narrow, serrated bill and bushy crest set it apart from other ducks. These small mergansers nest in wooded areas, primarily in the western part of the state.*

Places to Watch Ducks

Lee Metcalf National Wildlife Refuge—Take U.S. 93 to Stevensville, then turn east onto the East Side Highway and follow to Wildfowl Lane. Take this road for 1.5 miles until you see the refuge boundary signs.

Red Rock Lakes National Wildlife Refuge—From Monida (immediately off Interstate 15) turn east on a gravel road and travel 28 miles to the refuge entrance.

Ninepipe National Wildlife Refuge and Ninepipe Wildlife Management Area—Four miles south of Ronan (45 miles north of Missoula), watch for refuge and WMA signs on U.S. 93.

Smith Lake Waterfowl Production Area—From Kalispell, follow U.S. 2 west for seven miles to Big Horn Drive. Turn south on Big Horn Drive, then take Smith Lake Road to the Kila Fishing Access.

Canyon Ferry Wildlife Management Area—Begins one mile north of Townsend and continues for two miles along the east side of U.S. 287. Or, from Townsend, follow U.S. 12 east for a short distance, then turn north onto Harrison Road.

Freezout Lake Wildlife Management Area—Drive three miles north from Fairfield on Highway 89, or 10 miles south from Choteau.

Benton Lake National Wildlife Refuge—Just north of Great Falls, turn off U.S. 87 onto Bootlegger Trail (Secondary 225) and follow it approximately 12 miles to the refuge entrance on the left side of the road.

Bowdoin National Wildlife Refuge—Follow U.S. 2 east of Malta for about one mile, then drive east on old U.S. 2 for about six miles.

Medicine Lake National Wildlife Refuge—Drive east from Wolf Point on U.S. 2 for 47 miles to Montana 16. Turn north on Montana 16, which runs through the west end of the refuge.

Fox Lake Wildlife Management Area—Take Montana 200 to Lambert, then follow a gravel county road south for a half mile and turn right at the junction of two unnamed county roads. Continue for a little less than a mile to the WMA signs.

Hailstone National Wildlife Refuge—Take Secondary 306 to Rapelje. From Rapelje, turn east on a county road and follow for four miles to Hailstone Basin Road. Take this road north about 1.5 miles to the refuge.

Big Lake Wildlife Management Area—In Billings, follow Rimrock Road to Secondary 302 and then drive toward Molt. Just before Molt, turn left on Eastlick Road and follow for about a mile. Turn right onto Lakeview Road until you hit the Molt-Rapelje Road. Turn left and drive 4.7 miles. Turn left on Wheat Basin Road and drive another 1.1 miles to Big Lake.

Female Barrow's goldeneye

Male green-winged teal

Above: *Skillful divers, Barrow's goldeneyes feed mainly on crayfish, mollusks, and aquatic insects.*

Left: *The smallest of the dabbling ducks, green-winged teal average less than a pound in weight. Quick and agile, they twist and turn in flight like shorebirds.*

Passing on a WILD INHERITANCE

by Mike Thompson

MY WIFE AND I are of such an age that inheritances occupy much of our time and thinking these days. We've learned that they come in all shapes and sizes. Just recently we inherited Jake, a gun-shy, golden retriever cross, along with a variety of other items, including a set of pink ceramic swans. We received a cash inheritance that was very helpful, but our experience with settling this estate also made us appreciate the need to plan carefully for passing inheritances on to others.

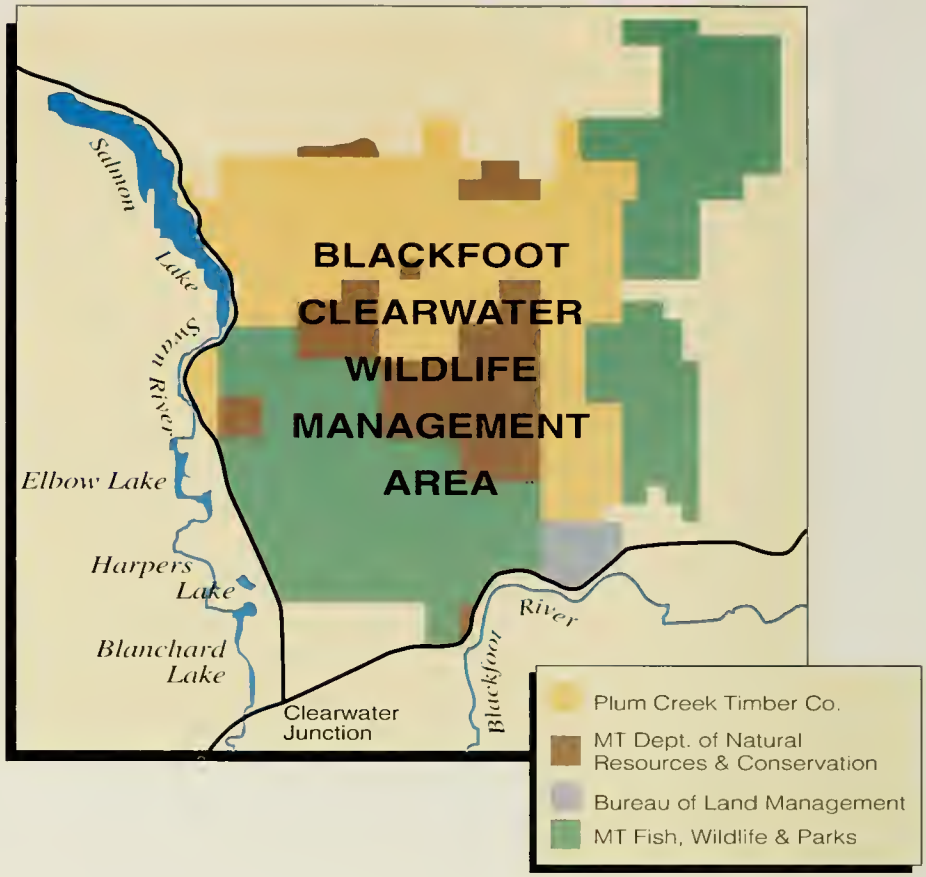
I didn't think about inheriting the Blackfoot-Clearwater Wildlife Management Area (WMA) when I first happened upon the place nearly 25 years ago. It was Thanksgiving, and a small group of friends from the University of Montana had piled into my black Ford Torino to probe the western fringe of the Bob Marshall Wilderness Area, by way of Holland Lake. We had driven 40 miles east of Missoula, along the Blackfoot River, and soon after bearing north toward Seeley Lake we stopped at a roadside pullout and read the sign. "Blackfoot-Clearwater Winter Game

CONRAD ROW

Range," it proclaimed, with the outline of a bull elk routed in the wood.

We surveyed the landscape, fairly flat and uninspiring, and saw nothing. We certainly hadn't heard of this place before, and without evidence to the contrary, we drove away chuckling about the winter game range without any game. After all, we were headed for the Bob. I had embraced the Bob and the Rocky Mountains as my national inheritance, my birthright, ever since I was old enough to read about the exploits of Bill McRae and other writers in the outdoor magazines of the day. I felt committed to help protect this inheritance, even before I understood how to do so. But, in my mind, my inheritance of an unheralded winter game range would be boxed up and stored away in a dark place, like so many ceramic swans.

I devoted little more consideration to the Blackfoot-Clearwater WMA until I became the area wildlife biologist and WMA manager for Montana Fish, Wildlife & Parks (FWP) in 1987. All of a sudden, I was responsible for the "winter game range without any game." It was a lot like inheriting old Jake. I didn't care that he was gun-shy, that he wouldn't give his ball to me when he brought it back, or that he was overweight, as long as he was my father-in-law's dog. But when Jake became my dog, I fixed what I could (I stopped overfeeding him) and I learned to live with what I couldn't (he lets me catch him and manually extract the ball from his jaws). Once I accepted responsibility for him, it was easy to love him as my own.



KERRY NICKOL

From blue grouse (above) to mule deer (opposite page), the Blackfoot-Clearwater WMA provides key habitat for dozens of wildlife species.

I soon learned that my first impressions of the Blackfoot-Clearwater WMA were also born out of ignorance, and that many of the 1,100 elk and several hundred mule deer I counted there during my first aerial survey had migrated 10 to 20 miles to this traditional winter range from remote summer ranges in the Bob Marshall Wilderness itself. I came to understand that much of what we value in the Bob—the elk and the deer, along with the coyotes, ravens, gray jays, wolverines, mountain lions, bald and golden eagles, wolves, and other species that kill or feed on the remains of elk and deer—is sustained, directly or indirectly, by this comparatively nondescript winter range in the valley beyond the mountains. To inherit and protect the Blackfoot-Clearwater WMA is to inherit and protect the Bob.

Over the years, we present-day stewards of the Blackfoot-Clearwater WMA have worked with diligence to do just that. We've researched elk and deer populations to learn how we might better protect and improve their habitat. We've learned how to work more cooperatively with neighboring ranchers to improve elk habitat on adjacent private lands while expanding cattle grazing opportunities on the WMA. We've controlled invasions of exotic weeds and maintained the pristine character of native rangelands. We've reduced impacts of elk management on other species that enrich elk habitat, and made special efforts to enhance habitat for bull trout and waterfowl, and for cavity-nesting birds such as woodpeckers and bluebirds. And, we've increased public interest and participation in WMA management.

By taking a narrow view, we might conclude that we are fulfilling our responsibilities as stewards of the Blackfoot-Clearwater WMA with this

program of maintenance and enhancement. I would agree if our inheritance was simply embodied in the object, like the ceramic swans. Clean them, don't break them, and we can pass them on to the next in line. But, it seems to me that our inheritance in the Blackfoot-Clearwater WMA is more like my inheritance in my father-in-law's dog. Despite the best possible care, Jake will not live to be inherited again. Because of its limited life span, I even wonder if a dog really qualifies as an inheritance at all until I stop to think about what my wife and I actually inherited with Jake. Maybe our true inheritance is the pleasure of dog ownership, which we will surely continue with other dogs when this one is gone, and which my wife and I will plan to pass on to someone we love someday. But, to pass it on, it will have to take a different form.

As FWP prepares to commemorate the fiftieth anniversary of the Blackfoot-Clearwater WMA, we naturally find ourselves planning for the work that is needed to pass this critical winter range intact to future generations. Routine care and maintenance are only part of the answer. The Blackfoot-Clearwater WMA is a product of times past, and the times have changed dramatically. At 67,000 acres, this WMA is Montana's largest state-controlled property dedicated to wildlife, but only 18,000 acres are in FWP deeded ownership. The remaining acres are leased into the WMA under limited, short-term agreements with other landowners. Of greatest concern for the future is 7,800 acres in the heart of the winter range, currently owned by Plum Creek Timber Company. Although Plum Creek has no immediate plans to sell its holdings within the WMA, there can be no assurance for the future in today's highly competitive marketplace.

If we make the mistake of believing that our public inheritance lies in the present political boundaries of the Blackfoot-Clearwater WMA, we miss the point entirely. It never was about the WMA itself—the fences, the roads, the buildings, the signs. From the very beginning, it has always been about effective winter range for elk and deer, by whatever means would best assure it. In 1948, the best way was to purchase the deeded acreage of the Boyd Ranch and maintain the leases that came with it. At that time, and for most of the 50 years that followed, those leases represented a fairly secure commitment in land management direction. But, in today's real estate and business climate, those leases are liabilities to the winter range because they do not prevent the land from being sold at any time and eventually occupied by residential subdivisions. To pass on our inheritance of secure winter range for elk of the Bob Marshall Wilderness, we will have to invest in a new package of land ownership and management agreements on the Blackfoot-Clearwater WMA.

CONRAD ROWE

It's a serious test for the very concept of publicly owned wildlife in the heart of the Montana Rockies. FWP management programs are rooted in the assumption of a powerful public interest in perpetuating wildlife for future generations. Such critical assumptions are seldom tested as long as wildlife management can be accomplished with annual revenues from hunting license sales or other well-accepted income sources. But, the purchase of 7,800 acres in today's real estate market is far beyond FWP's financial means. To accept and pass on the inheritance of a state-owned winter range for one of Montana's great migratory elk herds will require Montanans and interested citizens from all across the United States to actively reaffirm their commitments. This project will require public involvement, private funds, and the dedication, cooperation, and creativity of numerous individuals, organizations, and government agencies. Anything less will jeopardize the future of the Blackfoot-Clearwater WMA, and its treasured wildlife.

Thankfully, there is magic in the fiftieth anniversary of the Blackfoot-Clearwater WMA. It began in May of 1998, when the Blackfoot-Clearwater Citizens Advisory Council challenged FWP to commemorate the anniversary by bringing the 7,800-acre Plum Creek inholdings into public ownership. In September, upon recommendation by FWP, the Montana Fish, Wildlife & Parks Commission "pledged" $500,000 to the cause (pending public review and

As FWP prepares to commemorate the fiftieth anniversary of the Blackfoot-Clearwater WMA, we naturally find ourselves planning for the work that is needed to pass this critical winter range intact to future generations.

CHUCK HANEY

final project approval). With this commitment, the Rocky Mountain Elk Foundation soon adopted the Blackfoot-Clearwater project as a national priority for fundraising and staff support. At the same time, Five Valleys Land Trust of Missoula accepted a partnership role in fundraising and publicity, and nationally acclaimed artist Monte Dolack generously agreed to work with Five Valleys to produce an original painting and commemorative posters.

Behind the scenes, FWP, Plum Creek Timber Company, and the Montana Department of Natural Resources and Conservation (DNRC) explored options for a land exchange that could reduce by 3,300 acres the amount of Plum Creek land that would have to be purchased. Under this proposal, DNRC would exchange scattered tracts in the Blackfoot Valley to Plum Creek for a 3,300-acre block of elk winter range on the WMA. Then, FWP and DNRC would enter into an unprecedented, long-term management agreement that would ensure DNRC a fair market income from these lands for the State School Trust, while providing for the habitat needs of wintering wildlife to satisfy FWP's mission and WMA objectives. The primary feature of this cooperative management agreement would be a forest management plan for all state-owned lands on the WMA, whether DNRC or FWP's. In essence, the two state agencies would jointly manage an important portion of the Blackfoot-Clearwater WMA, with the intended result of improved management efficiency, greater economic return to the state, and long-term security for wildlife. Montana's Board of Land Commissioners, chaired by Governor Marc Racicot, commended DNRC and FWP on their cooperative approach when DNRC Director, Bud Clinch, first presented the idea for comment in December. However, all parties realize that wildlife habitat requirements and DNRC's responsibility to generate revenue will ultimately dictate whether the mandates of both agencies can be met on the same acreage. Forest inventories are now underway to address this question.

There may be opportunities for additional land exchanges to further reduce the amount of land that must be purchased and the amount of money that must be raised from private donors. The Lolo National Forest and the Missoula Field Office (Bureau of Land Management) have indicated an interest in participating in land exchanges if appropriate possibilities are uncovered. Plum Creek inholdings left over after completion of the land exchanges will be purchased outright, or other timberlands will be purchased for exchange.

BILL THOMAS

To assist in the fiftieth anniversary fundraising effort, Missoula artist Monte Dolack will produce an original painting and commemorative posters.

More than 1,000 elk migrate from remote summer ranges in and around the Bob Marshall Wilderness each fall to the Blackfoot-Clearwater WMA.

Because the original WMA purchase in 1948 was accomplished with matching funds enabled by the federal Pittman-Robertson (P-R) Act, the U. S. Fish and Wildlife Service must review all property exchanges and management plans to ensure that lands purchased with P-R funds are still being managed for the benefit of wildlife, as intended.

The project's first important milestone will be a grand anniversary celebration at the Blackfoot-Clearwater WMA on June 12, 1999. It will be a time to reflect on the foresight of our predecessors, who accomplished one of the earliest public acquisitions of habitat for wildlife management in the United States, and who enabled the restoration of elk to the Blackfoot Valley. It will be a time to recognize the contributions of hunters, neighboring ranchers, and numerous other individuals and organizations over the past 50 years, and the confidence they have placed in FWP to lay the difficult groundwork for 50 more. It will be a time to celebrate this year's progress toward bringing 7,800 acres of critical habitat into state ownership and management. And, it will be a time when we set forth the challenge for the coming year to bring this acquisition effort to a successful close.

In my mind's eye, June 12 is a beautiful spring day. Busloads of people gather on the promontory overlooking thousands of acres of waving, green grass where an elk herd will graze again come winter. Strings of horses will bring others to join us from neighboring ranches across the winter game range. People who have never been to this place before will come to accept their inheritance. I hope you'll be among them. And, we'll say, we are grateful for what our forebears did for us. We'll say, let's be the ones to do it for our children. ■

WE NEED YOUR HELP

in passing on our heritage of critical winter range for elk and deer on the Blackfoot-Clearwater WMA. You can participate by making contacts from the list below.

Fiftieth anniversary celebration and fundraising banquet at Blackfoot-Clearwater WMA, sponsored by Rocky Mountain Elk Foundation, Seeley Lake Chapter, June 12, 1999

Contact: Wayne Heaton, Box 450, Seeley Lake, MT 59868 (406-677-3773); or Mike Thompson, FWP, 3201 Spurgin Road, Missoula, MT 59804 (406-542-5523).

Monte Dolack artwork

Contact: Ali Duvall, Five Valleys Land Trust, 104 East Main St., Missoula, MT 59802 (406-549-0755).

Rocky Mountain Elk Foundation (donations, brochure, newsletter)

For Montana fundraising effort, contact: Kirk Murphy, RMEF, 2291 West Broadway, Missoula, MT 59802 (406-883-1147); for national fundraising effort, contact: Gary Burnett, RMEF, 2291 West Broadway, Missoula, MT 59802 (406-523-4500).

To participate in public review and decision-making process

Contact: Mike Thompson, FWP, 3201 Spurgin Road, Missoula, MT 59804 (406-542-5523); or Tony Liane, Area Manager, Southwestern Land Office, DNRC, 1401 27th Ave., Missoula, MT 59804 (406-542-4261).

To thank Plum Creek Timber Co. for negotiating to add 7,800 acres of critical elk habitat to the Blackfoot-Clearwater WMA

Write: Denny Sigars, Clearwater Unit Manager, Plum Creek Timber Co., 140 North Russell, Missoula, MT 59801

To encourage the Lolo National Forest and BLM to consider land exchange options to benefit the Blackfoot-Clearwater WMA

Write: Debbie Austin, Supervisor, Lolo National Forest, Bldg. 24, Fort Missoula, Missoula, MT 59804; and Nancy Anderson, Field Manager, Missoula Field Office, BLM, 3255 Fort Missoula Road, Missoula, MT 59804.

Promise

by John Fraley

It's not very often that one generation can guarantee to the next that a cherished heritage will continue. But with the proposed Thompson-Fisher land agreement, the largest of its kind in Montana's history, such a promise may be possible.

Montana Fish, Wildlife & Parks (FWP), Plum Creek Timber Company, and the Rocky Mountain Elk Foundation are working together on a pact that would maintain traditional open space and public access to as much as 170,000 acres of Plum Creek timberland. Among other values, these lands make up some of the finest winter range for wildlife in northwestern Montana and contain some of the area's most important fisheries.

Governor Marc Racicot, in a letter to Plum Creek Timber, underscored the importance of making certain these lands remain in Montana's public open spaces. "Indeed," he wrote, "some of my special childhood memories growing up in Libby were the times spent with my father and brothers fishing the Thompson River. Dad taught us to fish along that river."

The Elk Foundation is facilitating the process in which Plum Creek would sell its development rights to FWP, maintaining the custom and tradition of public use in the area. As part of the pact, Plum Creek would retain actual ownership of the land and the timber management rights.

According to Alan Christensen, vice president of conservation programs for the Elk Foundation, the agreement would be a big win for the public. "This agreement would ensure the continued tradition of public recreational use and protect the land's current natural resource values," he says. "People have treasured the ability to access the area for decades and the agreement would ensure their opportunity in perpetuity."

PAUL UPDIKE

A cooperative process offers potential to protect wildlife habitat and ensure recreational traditions for future generations.

DenverBryan.com

The key wildlife areas identified in the proposed agreement support seven big game species, including moose (above), deer, elk, and bighorn sheep, as well as wolves and grizzly bears.

The agreement would involve up to 96,000 acres in the Thompson River drainage and as much as 73,000 acres in the Fisher River drainage (see map). According to FWP director Patrick J. Graham, the Thompson-Fisher area is FWP's highest priority Plum Creek land project in northwestern Montana.

Source of Funds for the Agreement

A good portion of the funds for the agreement would come from the Wildlife Mitigation Fund administered by FWP. The Bonneville Power Administration set up the fund to mitigate for wildlife habitat lost to Libby and Hungry Horse dams; the bill is paid by electric rate payers in the Pacific Northwest. Several other sources are being explored for additional dollars as well.

FWP's wildlife mitigation coordinator Alan Wood notes that a number of steps need to be completed before a firm agreement can be reached. Talks began between the cooperators last winter, and the interested parties have continued to meet. The cooperators have each hired land appraisers to determine the value of the rights being sold. The parties have agreed to negotiate based on this estimate of fair market value. Following an agreement among the principals to terms, values, and project scope, a thorough public review process will be initiated. In the meantime, says Wood, the parties are looking for input from as many people as possible to ensure the best possible agreement.

According to Art Vail, Flathead unit manager for Plum Creek, the agreement would be a positive step. "Plum Creek would like to see this area remain in our timber base, and we

recognize the high recreational and environmental value of the Fisher and Thompson rivers," he says. "This project has great potential to benefit both the public and Plum Creek and we hope it will make economic sense to both parties. It seems a logical and worthwhile use for the public funds available for this purpose."

Terms of the Agreement

In addition to preserving current recreational access and commercial timber harvest, the three organizations are discussing other potential terms, including livestock grazing, continued commercial outfitting, habitat enhancement, future land divisions, restrictions on permanent structures, and restrictions on other commercial uses.

The agreement would be in the form of a perpetual conservation easement that would remain with the land, not the landowner. The easement holder (FWP) would monitor the easement over time. The cooperators have identified these goals for any agreement:

- Plum Creek would retain the right to manage the forest and its company roads consistent with sustainable forestry principles.
- Public use would be guaranteed, and include current traditional uses such as motorized access, hiking, hunting, fishing, camping, river floating, berry picking, and other historic public uses of the forest.
- The agreement would restrict future development in the area.
- A variety of commercial uses would continue, such as grazing and commercial outfitting, sand and gravel mining, firewood cutting, and huckleberry picking.
- Mineral potential is being evaluated and high potential areas may be excluded from the agreement.
- Monitoring would be important to the success of the agreement.

DONALD M. JONES

Deer and elk herds in the two priority wildlife areas provide about 40,000 hunter days per year. The conservation easement would guarantee public access in perpetuity and restrict future development.

Fish and Wildlife Values

As part of their analysis, biologists have identified priority fish and wildlife areas. According to the habitat conservation biologist for this project, Gael Bissell, the key wildlife areas consist of streamside and wetland habitats found along the rivers and the low-elevation forests. These habitats are similar to those lost when Libby and Hungry Horse reservoirs filled. They support aquatic and terrestrial furbearers such as beaver, mink, bobcat, and lynx. They also provide critical winter and spring range for big game. According to Bissell, the abundant deer and elk herds in these two areas provide about 40,000 hunter days per year.

"It's a special place in a lot of people's minds, a spiritual place," says FWP wildlife biologist Bruce Sterling, who is stationed in Thompson Falls. "It's a remote section of Montana, yet readily accessible with tremendous wildlife populations. I like this agreement because it will keep it that way."

Sterling notes that the habitat supports seven big game species, including moose, deer, elk, and bighorn sheep, numerous furbearers, and two endangered species, the wolf and grizzly. "The Thompson still has a beautiful, wooded setting," he adds. "You can walk among the ponderosa pines and imagine what the country looked like when David Thompson passed through in the early 1800s."

According to Jerry Brown, FWP's wildlife biologist in Libby, the Fisher River drainage is critical to the big game populations that winter there. "The lower Fisher is the most important block of big game winter habitat in Lincoln County," he says. "To potentially lose this area to commercial development and subdivision would be an irretrievable loss to the area's wildlife and to the hunters and other recreationists who enjoy those resources."

Brown notes that the area serves as winter range for elk, mule deer, and moose from the Cabinet Mountain Range, as well as animals moving into the area from Wolf Creek, Little Wolf Creek, and the upper Fisher drainage.

Native and recreational fisheries values are high as well, providing about 20,000 angler days annually. The highest priority areas include hundreds of acres of streambank in both drainages and specific nursery streams such as Wolf Creek in the Fisher drainage and Big Rock Creek and Fishtrap Creek in the Thompson drainage.

FWP fisheries biologist Pat Saffel of Thompson Falls is enthusiastic about the agreement and what it will mean for the Thompson River. "The mainstem Thompson River is a fine rainbow fishery," he says. "It's accessible, and good for folks of all levels of fishing ability. This agreement would protect the streamside habitat from development and maintain the public's opportunity to fish the stream."

Saffel says the river is very popular with local anglers because of the present easy access. "I can walk out my door and in 20 minutes have a fish on the line," he says. "I can take my 5-year-old daughter there and know I can get her to the stream and catch a trout."

Saffel also points out the value of the tributary network to the overall fishery. For example, Fish Trap Creek supports good numbers of bull trout and it's also an excellent recreational fishery for westslope cutthroat. Big Rock Creek supports cutthroat, and may be of importance to bull trout in the system.

The Fisher River offers extensive public fishing opportunities as well. And Wolf Creek, a tributary, supports the rare native redband rainbow trout.

Public Sentiment

Some community leaders predict the agreement will have broad public support because it maintains traditional use and character of the land. Says Bruce Vincent of Communities for a Great Northwest, "There's a great deal of support for this agreement from people in our organization. Our membership base is dead center in the middle of these project areas. I've not spoken to a soul who's not excited about it."

Sanders County Commissioner Carol Brooker notes that the agreement would be positive for Sanders County residents and that the advantages of the agreement outweigh the disadvantages. She says she is "solidly behind" the proposal. The *Sanders County Ledger* came out in support of the agreement as well, noting that it should "provide benefits to the area for decades to come," and sets a standard for public-private partnerships.

Lincoln County commissioner Rita Windom has some concerns about the agreement, noting it is important that it include language that ensures timber harvest into the future. She also cautions that the entire Thompson-Fisher area could one day be under restrictive easements. "Economics is the most important concern to Lincoln County residents right now," she says.

Libby Representative Scott Orr sees a "red flag" in the agreement as it affects property rights. "I believe property rights are inviolate, not to be sold or traded," he says. In terms of wildlife mitigation dollars, Orr asks why funds aren't also available to "mitigate for private property issues and impacts to people" under the Northwest Power Act. "We lost a lot of productive property when Libby Reservoir was filled," he notes. Orr says he is not trying to stop the agreement, but thinks it is important to raise these philosophical points.

Timing of the Agreement

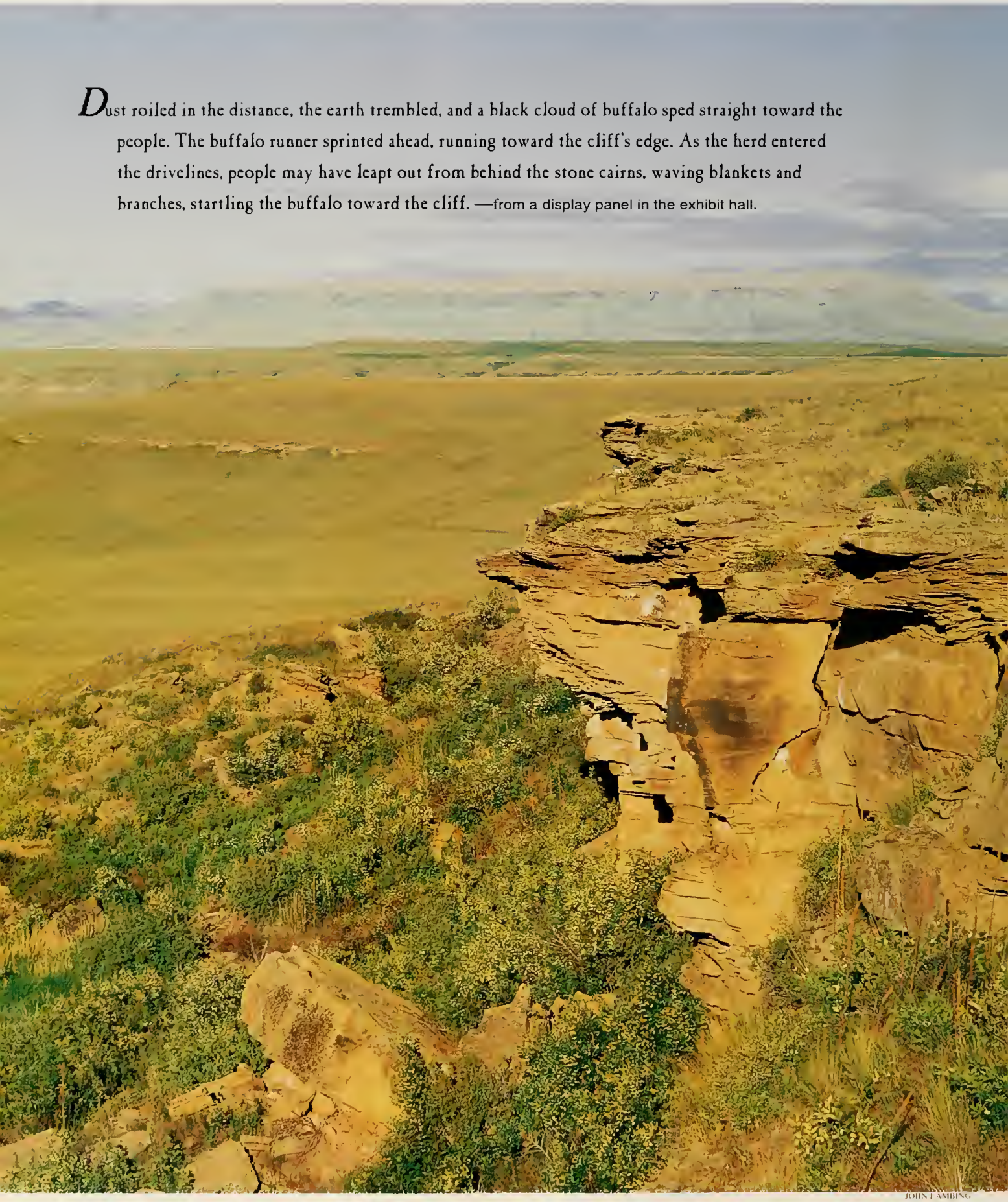
The scope of the deal is so large that it will require extra time to complete. Following an appraisal, the parties will begin to negotiate the details of a proposed transaction. FWP would then begin a formal environmental assessment and public review process that would extend into the fall of 1999. If the project makes it through this public review process, the FWP Commission would need to approve it, followed by the State Land Board. Conceivably, the agreement could be final by the turn of the century.

"I like the idea of pulling this together in a year's time," says Jerry Sorensen, manager of land use planning for Plum Creek. "But we want to remain flexible and make sure the pact is put together correctly."

FWP's Region 1 supervisor Dan Vincent sees the project as the most important and far-reaching he's seen during his 25 years as a natural resource manager. He sums up the potential outcome in simple terms: "People interested in the economy of Sanders, Lincoln, and Flathead counties would like to see timber harvest continue for the good of the economy, and it would," he says. "Folks interested in recreation want hunting, camping, and fishing to continue, and it would."

Vincent has no illusions that making the promise will be easy, though. "The size of the landscape is so large that it intimidates people," he says. "We need to be creative to make it work." ■

*D*ust roiled in the distance, the earth trembled, and a black cloud of buffalo sped straight toward the people. The buffalo runner sprinted ahead, running toward the cliff's edge. As the herd entered the drivelines, people may have leapt out from behind the stone cairns, waving blankets and branches, startling the buffalo toward the cliff. —from a display panel in the exhibit hall.



JOHN FAMBING

the Next Journey

by Bruce Auchly

BRUCE AUCHLY

ON JUNE 5, A BRIDGE spanning two cultures opens at one central Montana state park.

Welcome to the newest jewel in the state park system's crown: the visitor's center at Ulm Pishkun State Park. Twelve miles southwest of Great Falls, the 6,000-square-foot building hunkers down on the prairie. Several hundred yards north of the site looms a cliff over which prehistoric peoples lured thousands of bison to their death. It was feast or famine, depending if one's family group could drive bison over the cliff.

Visitors to the new center will see a slice of life on the prairie from prehistoric through modern times: a life for eons dominated by bison and in the last 100 years by agriculture.

The center will be open from 10 a.m. to 6 p.m., seven days a week, from Memorial Day to Sept. 30. The rest of the year, the center will be open by appointment. Entrance fees will be the same as in other state parks: $1 a person or $4 a carload. A state parks passport attached to a vehicle's windshield allows all the occupants in for free.

Besides cultural ties, the $2.2 million project at the 27-year-old state park links local and state tourist attractions. For Great Falls, the center complements the new Lewis and Clark Interpretive Center and the C.M. Russell Museum. For Montana Fish, Wildlife and Parks (FWP), Ulm Pishkun completes a chain of developed, destination state parks stretching across central Montana: Lone Pine near Kalispell and Makoshika near Glendive.

As the final link in either chain, this one wasn't easily forged. For most of this decade, Dave Todd and the FWP Parks Division office in Great Falls have been overseeing the planning and building of the visitor center.

"I've been concerned about it for a long time," says Todd, regional parks manager. Dating back to the 1980s, the Parks Division has worked to make the prehistoric bison jump near the town of Ulm more than just a party site for area youth. Todd wasn't alone. Stan Meyer, Great Falls Chamber of Commerce director in the mid-1980s, urged the department to do something to protect the site.

"Stan said, 'Hey, how come you're not doing more out there,'" Todd remembers. The answer was simple: "We said we can't do more because we don't have the resources; we only had an $800 budget."

That wasn't even enough to fix the fence.

"I felt it was being destroyed," recalls Meyer, now chairman of the FWP Commission. "And it was one of the few pishkuns that was still relatively intact. The rest were being consumed by subdivision and farming."

Come the first Saturday this June, the long overlooked state park will get its due. "I've got a real good feeling about it," Todd says.

In the last 100 years the site was mined for bison bones and quarried for sandstone. It became a state park in 1972. Land trades and purchases have increased the park area from 170 to 1,402 acres. The original site consisted of land atop the cliff and the precipice. That part of the park atop the pishkun remains, but it has become a park-and-walk section: a trail now winds where a

road once traveled. The additional land has extended the park at the base of the pishkun. Nearby land controlled by the Department of Natural Resources and Conservation may someday be added to the park.

As local backing grew over the years for an expanded park, it became imperative to find out what was left, what had been destroyed or removed. With the urging of the Cascade County Historical Society and the help of public and private funds, archaeologists from Montana State University conducted digs in 1992 and 1993 at the pishkun. The digs uncovered significant cultural deposits and a better understanding of the bison killing process.

The building contains an exhibit hall, storytelling circle, classroom, and bookstore. The center's major feature is the exhibit hall, which transforms the visitor back hundreds of years. A mural representing all four seasons at the bison jump wraps around the hall. "It was quite a challenge to get the [seasonal] transition," says Kent Pendleton, who painted the mural. Another hurdle was painting the 160-foot-long mural in his Denver studio, which could only handle 16 feet of canvas at a time. Pendleton, working from photos because he had never seen Ulm Pishkun before, painted the sky and roughed in the background in his studio. He finished the project after it was hung in the hall. The result is at once familiar and dramatic.

As one enters the hall, spring is on the right, summer on the left. Bison graze all around. Up ahead, a cliff juts from the wall. Walk to the cliff base and a hidden speaker pours forth a first-person story describing how Indians managed to drive bison over the precipice. The voices are Lenard Mountain Chief and his grandson, Wacey, Blackfeet Indians reading from *The Buffalo Jump* by Peter Roop.

Turn to the right and the season changes to fall as the scenery drops back to the prairie. A little farther and it's winter in an Indian village. On the canvas a woman scrapes a stretched bison hide. At her feet, a real bison hide is staked on the ground. In front of the painting stands a tepee made of lodgepole pines and bison hides. The tepee is a Blackfeet design and was obtained through the help of the Museum of the Plains Indian in Browning. Workers from Promotion Products Inc. of Portland, Oregon, spent five months putting the entire display together.

Step inside the tepee and the smell of smoke from the tanned hides becomes obvious. The second sensate experience is the light that filters through the hides. The tepee is not at all dark and cavernous. The hides allow in an amazing amount of light.

Outside the tepee, slices of bison meat drape across a rack for drying. Scattered throughout the hall in front of the mural are plants, a couple of mounted bison, and display panels that inform and question the visitor.

Behind the center a half-mile trail heads to the west, ending near the base of the cliff. The path is named "Trail of Perceptions," and interpretive panels along the way challenge the visitor to look at different uses of the land and how different people—prehistoric man, homesteaders, farmers—looked at the land.

The land. Despite all the money and attention poured into the new visitor center, it is but a speck nearly swallowed up by the landscape. Step outside and the vastness of the prairie and the sky overwhelm. The only trees in sight grow at distant farmhouses. The colors depend on the season: brown or green or white underfoot, azure and white overhead by day, pinpricks of light by night.

On a recent day, a group meets at the center to consider its uses. Through the center's classroom windows the Little Belt Mountains shadow the horizon. Cottonball clouds float overhead, ghost riders in the sky. It's sunny outside and warm inside, out of the wind.

The wind. The wind whips down from the mountains to the west and southwest, then scoots over the stubblefields and grasslands, skipping across the coulees. It's constant. There's nothing to stop it. People who live here mostly don't notice, though. A New Yorker never glances up to gawk at a skyscraper. A Pacific Islander doesn't spend his evenings in awe of spectacular sunsets.

The classroom. Half a dozen teachers gather with FWP folks, a historian, and a state archaeologist, grappling over the center's potential. Should the classroom space become a library and research room? That's quickly voted down. School kids can do research before or after they visit, either through the library or the Internet. Demonstrations such as making pemmican and tanning hides would be nice. But it's the more mundane subjects, like space to eat lunch and walls to hang up young artists' work, that get high marks. Teachers in the group also argue for an interpreter, or guide, when they bring a class to the site, or at least a curriculum before the visit so they can help the students understand what they see.

Back in the 1980s, then Chamber of Commerce director Meyer remembers thinking, "If we could understand what happened there, we could use that knowledge to build bridges between the Indians and the non-Indians."

BRUCE AUCHLY

The bridge is built. It's time to cross and start the next journey. ■

STEVE ELLIS

In the photo above, artist Kent Pendleton applies finishing touches to a mural that wraps around the exhibit hall. At left, an interpretive panel explains how bison are uniquely adapted to the northern plains. The mural section at right depicts an Indian village in winter.

BRUCE AUCHLY

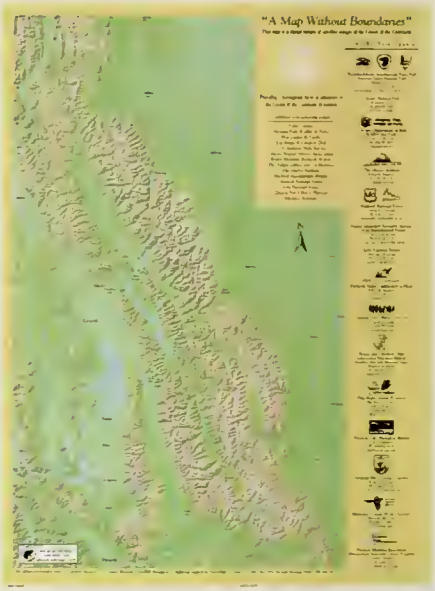
"CROWN OF THE CONTINENT" POSTER AVAILABLE

In 1993, Flathead Valley geologist Lex Blood convened a group of conservationists and educators in Missoula to propose formation of a new educational consortium. Now in its seventh year, the Crown of the Continent Ecosystem Education Consortium, or COCEEC ("co-seek"), integrates educational opportunities in the area straddling the Continental Divide in northern Montana and southern Alberta and British Columbia.

Today, 20 state, federal, and private organizations are involved in the consortium. Each organization has individual goals and objectives, but the collective mission is to foster a better understanding of the region's environmental, social, political, and economic components through educational activities and projects.

The latest project sponsored by the consortium is a colorful poster/map that provides a detailed look at the regional landscape. Kalispell artist Jim Clayborn did the artwork that graces the front of the poster, while the map on the back was produced by Jim Schumacher at the University of Montana's Wildlife Spatial Analysis Lab.

The poster theme, "Forever Learning and Growing," describes the lifelong process of learning achieved through acquisition of knowledge. The map, a digital mosaic of satellite images of the Crown of the Continent Ecosystem, is presented without roads or political boundaries to provide a clearer view of the land itself. A layer of plastic laminate over the map provides a tool for students to sketch river drainages, vegetation patterns, elk migration routes, grizzly bear home ranges, or roads, towns, and cities. This can help students understand why political boundaries or roads and trails were created, or why animals demonstrate certain movement patterns. Students can also discover why scientists have difficulty delineating where one ecosystem begins and another ends.



A new poster/map available free of charge to educators features a digital mosaic of satellite images of the crown of the Continent Ecosystem.

Folded copies of the poster/map are distributed free to educators. Unfolded copies suitable for framing cost $2 each. A limited edition of 100 signed prints was produced on high-quality, archival paper; these are available at $50 each. All proceeds will support future COCEEC educational projects. Purchases help support and further the collaborative mission of COCEEC. For further information contact: COCEEC, P.O. Box 7457, Kalispell, MT 59904, or call 406-755-1211.—*Lisa Flowers, Boone & Crockett Conservation Education Program*

FISHING CENTER AIDS YOUNG ANGLERS

Exciting opportunities await schools, youth groups, or other noncommercial organizations interested in borrowing flyfishing equipment. This year marks the beginning of a new program sponsored by Montana Fish, Wildlife & Parks (FWP), the Sportfish Restoration Fund, and the Federation of Fly Fishers (FFF). The program provides flyrods, reels, and fly-tying equipment on a loan basis for any noncommercial educational group.

Flyfishing is a wonderful way to build relationships between our youth and our resources. The loan program helps groups overcome a major obstacle: obtaining enough equipment to conduct classes and activities. Apart from being a great way to support flyfishing and aquatic resources, such events are also a great way to build community togetherness.

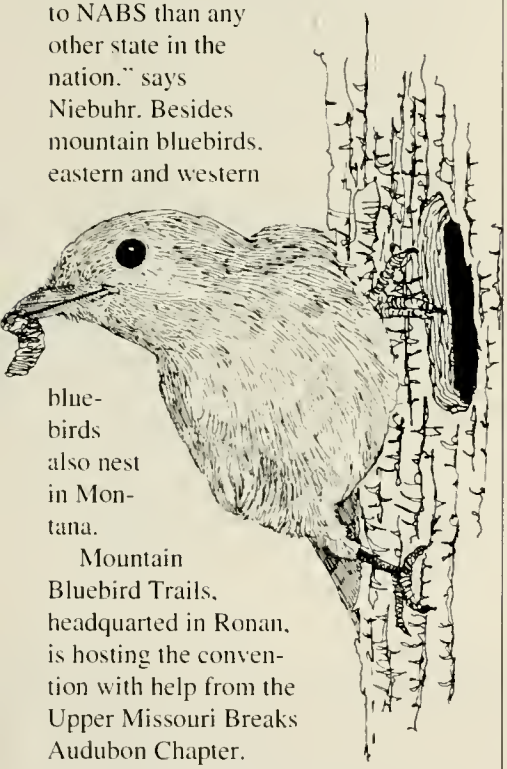
The application process for obtaining equipment is simple. Have your organization contact Chris Marosek at the International Fly Fishing Center (IFFC), 215 Lewis St., Livingston, MT 59047. Have specific dates for use of the equipment along with approximate numbers needed. If equipment is available on those dates, your request will be granted. Shipping and handling are the only costs to the borrower. Equipment is limited, so apply early.

For more information call Chris Marosek at 406-222-9369 or e-mail at cmarosek@yahoo.com.

Bluebird Society to Meet

Montana will host the twenty-second annual meeting of the North American Bluebird Society (NABS) June 17–20 at the Heritage Inn in Great Falls. Coordinator Bob Niebuhr says he expects 250 people from 30 states and Canadian provinces.

Founded in 1978, NABS has never held its annual convention in Montana before, though it's an important bluebird state. "We are a big bluebird-producing state. We've raised more mountain bluebirds and reported them to NABS than any other state in the nation," says Niebuhr. Besides mountain bluebirds, eastern and western bluebirds also nest in Montana.



Mountain Bluebird Trails, headquarted in Ronan, is hosting the convention with help from the Upper Missouri Breaks Audubon Chapter. Mountain Bluebird Trails started in the mid-1970s. In the group's first year, it reported fledging, or raising to fly, five young bluebirds. Things got serious, Niebuhr says, in the early 1980s as the group expanded east of the Continental Divide. More people joined and built more bluebird houses. In the last seven years, the group has reported fledging 112,232 bluebirds.

The national convention consists of three days of field trips and one day of business and workshops in Great Falls. Cost is $99 per person before June 1, or $110 after. The magnetism of the bluebird will bring people from all walks to life to the convention, Niebuhr says. "I've got Ph.D.s from eastern colleges to bricklayers. It's a very diverse group, people who enjoy building bird houses and putting them out."

To find out more about the convention, contact Niebuhr at home (406-761-5842); at work (406-453-5143); by Fax (406-453-3840); or by e-mail: blubrdbob@prodigy.net.—*Bruce Auchly, FWP information officer, Great Falls*

Make Sure Campfires Are Dead-Out

Each day we take many safety precautions for granted. We stop at railroad crossings, we wear seat belts, and we try to eat healthy food. Even when camping, we follow safety guidelines—we're careful with axes and we keep food safely stored.

But there is one threat we sometimes overlook: unattended campfires. Each year the Montana Department of Natural Resources and Conservation (DNRC) responds to forest fires that start as a result of campfires. Many of these fires were thought to be out by campers, but continued to smolder, often for days at a time.

On lands under DNRC fire jurisdiction, campfires are the leading cause of human-caused forest fires. These fires are expensive, harm our resources, and present a threat to human life and property. Even with advertising campaigns to prevent forest fires, Montana still experiences devastation from wildfires.

A few simple steps can prevent your campfire from spreading:

- Make sure you are permitted to have a fire where you are camping. There may be regulations that prohibit a fire due to land ownership or fire danger.
- Use existing fire rings where provided.
- The old rule still applies: have a bucket and shovel on hand.
- Build your campfire away from overhanging branches and avoid steep slopes.
- Scrape away ground litter and any burnable material in a 10-foot-wide circle.
- Keep your campfire small. A good bed of coals surrounded by rocks gives plenty of heat for cooking and warmth.

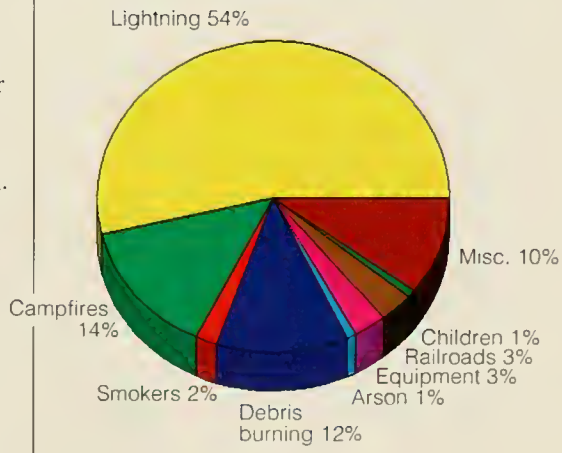
Make sure your campfire is dead-out before leaving the area. A breeze may come up while you're gone and quickly spread the fire. Follow these steps to ensure your fire is out:

- Drown it with water. Check all embers and sticks to be sure they are cool and wet.
- Stir. Add more water and stir again. Don't just bury it; it may smolder and spread.
- Feel all sticks and charred material. Make sure no roots are burning. Extinguish all materials that are still warm. This is the step most often overlooked and the reason for many escaped fires.

Please take the time to follow these precautions. Don't take Montana's forests for granted, and don't risk your family's safety either. For additional information on fire prevention, contact Keep Montana Green (406-542-4251), or visit us at www.keepgreen.org. Remember, only you can prevent forest fires!—*D.C. Haas, Fire Prevention Specialist, Department of Natural Resources and Conservation*

Percentage of Fires by Cause

(5-year average, Montana DNRC)



Montana's State Parks Welcome You Home

If you heard the buzzing of chainsaws, the hammering of nails, and perhaps even the roar of a backhoe's engine in many of Montana's state parks this past winter and early spring, it was simply the frenzied hustling of FWP's Parks Division employees getting ready for the official opening of Montana's state parks on May 1. And if you haven't purchased one already, a state park passport is a great—and very affordable—way for you to enjoy the upcoming park season as you are "welcomed home" to all the pleasures and values our state parks hold.

A state park passport allows all the occupants of a vehicle to which it is affixed unlimited entry for an entire year to all Montana state park sites where entrance fees are charged. The price is $20 for Montana residents and $24 for nonresidents for the 1999 parks season. Passports are valid from March 1 of each year through the following February and are on sale now at all FWP offices and a number of FWP license agents statewide.

Montana's state park system encompasses everything from urban lakes, buffalo jumps, prairie dog towns, and underground caverns to a landmark smelter stack at Anaconda and an island that is home to wild horses on Flathead Lake. There are rivers to float, lakes to boat, reservoirs to fish, a battlefield, waterfalls, ghost towns, places to view eagles, and historic spots galore. In short, Montana's state parks are Montana's great escapes. They're places of beauty, places to learn, places to play, places to get away from it all.

Each area of the state has its own fair share of state parks offering diverse recreational opportunities. Northwestern Montana boasts beautiful Flathead Lake State Park, which includes everything from pebbled beaches at Big Arm to mature conifer forests at Finley Point and rocks carved by glaciers at West Shore.

Southwestern Montana holds a treasure trove of state parks: Lewis and Clark Caverns and the geologic wonders it preserves; Bannack State Park, site of the first territorial capital of Montana; and Headwaters State Park, which hosts an annual "Weekend of Discovery" featuring the adventures of Lewis and Clark.

Central Montana has Giant Springs State Park in Great Falls and Ulm Pishkun State Park west of Ulm, the latter with a new visitor center that opens this summer.

State parks near Billings include Chief Plenty Coups, which celebrates Crow Indian history and lifestyle, and Pictograph Caves with ancient artwork telling the stories of our past. Cooney Reservoir and Lake Elmo State Park provide opportunities for fishing, boating, swimming, and wind surfing.

Makoshika State Park near Glendive welcomes the return of summer each June with a fun-filled day called "Buzzard Day," and hosts an outdoor dinner and play in August. The park's visitor center is a journey back in time to when the dinosaurs inhabited Montana.

If you're a Montanan, welcome back to sites that retell the stories of our past and into the comforts of familiar recreational spots. If you're visiting us from afar, welcome to the foundations of Montana's history and our natural heritage. Either way, welcome home to Montana state parks.—*Debbie Cheek and Bill Phippen, FWP headquarters, Helena*

Montana State Parks Calendar

May

22-23—Flathead Lake Paddlefest

Come and try different types of kayaks at Flathead Lake State Park, Wayfarers Unit, in Bigfork. Call 406-752-5501.

22—Canoe and Lake Kayak Demo Day at Frenchtown State Park

Demonstrations with new state-of-the-art canoes and kayaks. Call 406-542-5500.

29-30—Memorial Day Weekend "Loon and Fish Festival" in Seeley Lake

Art show, craft sale, guided bird walks, and loon-viewing tours. Call 406-677-3276.

29—Evening Campfire Talks begin at Lewis and Clark Caverns State Park

Campfire talks feature historical, recreational, and natural resource topics. Talks begin at dusk on selected days of the week. Call 406-287-3541.

June

3—Evening Campfire Programs Begin at Makoshika State Park

Thursday night talks include paleontology, geology, and history. Call 406-365-6256.

5—New Visitor Center Opens at Ulm Pishkun State Park

Call 406-454-5840 for details on the grand opening.

12—Buzzard Day at Makoshika State Park

Fun runs, "turkey shoot," nature walks, and many activities for the whole family. Call 406-365-6256.

24-27—Lewis and Clark Encampment at Giant Springs State Park

Living interpretation of the portage around Great Falls with a variety of historical activities for all ages, including plays, buffalo barbecue, lectures, guided tours, and float trips. Call 406-454-5840.

26—Evening Campfire Talks Begin at Salmon Lake State Park

Saturday night talks include historical and natural resource topics. Call 406-542-5533.

27—Dale Tash Montana History Day at Bannack State Park

Learn the history of Bannack. Call 406-834-3413.

SHARING "THE LAST BEST PLACE" WITH WILDLIFE

by Jeff Darrah, Region 2 Warden Captain, and Dan Curtin, Region 2 Game Warden (Missoula)

It's 1:38 a.m. on Sunday morning and the telephone is ringing at game warden Dan Curtin's house. "This is 911 Missoula dispatch, we have a black bear in a tree behind K-Mart, officers are on the scene. Can you respond?"

"I'm on my way; it'll be about 30 minutes."

This type of call is typical in Missoula. During 1998, FWP's Region 2—which includes Missoula, Powell, Mineral, Granite, Ravalli, and Deer Lodge counties—received more than 800 calls concerning problem black bears alone. Other wildlife-human issues routinely dealt with by FWP include deer in gardens, mountain lions in residential neighborhoods, geese on golf courses, bighorn sheep in town, wildlife-vehicle collisions, and nuisance skunks, porcupines, squirrels, even turkeys. When problems with urban wildlife arise, the phone lines start humming at FWP.

Traditionally, wildlife conflicts in Montana have revolved around damage to agricultural crops and property. But with rapid population growth in western Montana and in some parts of central and eastern Montana as well, more and more problems involve cities and suburbs. Montana has been increasingly depicted in movies and magazines as "The Last Best Place," and surveys indicate that many Americans are leaving high-population and high-crime areas to come here. Montana now ranks twentieth among the 50 states in number of people gained through in-migration.

While the overall state population has increased by about 10 percent in the last eight years, the population in Region 2 has increased much more dramatically. Ravalli County was recently listed as the fifty-third fastest growing county in the United States. Plans for new subdivisions arrive daily throughout much of western Montana. In many areas, these subdivisions extend into prime wildlife winter ranges and essential migration corridors. With this influx of people and urban sprawl comes a vast increase in human-wildlife interaction and conflict.

Urban wildlife issues are often complex and not easily resolved. Attitudes about wildlife vary, and newcomers often don't understand the problems they create when they move into wildlife habitat. Many homeowners are unaware that items like bird feeders, barbecue grills, unsecured pet food, fruit trees, and gardens can lead to conflicts. Because of this, FWP has taken an active role in the education of homeowners in Missoula and surrounding communities. We frequently give urban wildlife presentations in area schools and at civic group meetings. Brochures entitled "Living with Mountain Lions," "Living with Black Bears," and "Living with Deer" are available through various sources and have been widely distributed.

FWP wardens receive many hours of training to help them deal professionally with urban wildlife conflicts. We attend classes to learn the latest wildlife tranquilization procedures, how to safely handle immobilizing drugs, and how to capture and relocate a variety of wildlife species. This training is vital to ensure the well-being of the animals and the safety of the public when emergencies arise. Because urban wildlife problems are often emotion-charged and newsworthy, wardens also need public relations skills—e.g., cooperating with the media, working with other agencies (local sheriff and police), and reassuring the public that wildlife is being dealt with humanely.

As Montana's population continues to rise, conflicts with wildlife will inevitably increase. One recent study showed as many as six deer in one day killed by vehicles on Missoula's city streets and secondary roads. Last year in Region 2, wardens spent an estimated 600 hours on urban wildlife calls—an amount equivalent to one-quarter of one game warden's time. This growing demand stretches our already limited warden force's ability to respond to other pressing law enforcement problems.

DAN CURTIN

Statewide, FWP receives thousands of calls each year on black bear problems alone.

As residents of Montana we are fortunate to have diverse and abundant wildlife resources, literally in our own backyards. We must learn to live in harmony with wild animals and to take precautions to minimize conflicts. One action we recommend for homeowners is a self-administered "wildlife audit" of their property that can determine the measures needed to eliminate or significantly reduce conflicts. For more information about this audit or urban wildlife issues in general, contact FWP Region 2, 3201 Spurgin Road, Missoula MT 59804; or call 406-542-5500.

Ed Ellertson holds his record channel catfish.

Vernon Pacovsky set the white bass record two years in a row.

1998 FISH RECORDS

Eastern Montana Leads the Way

Like all records, fish records are made to be broken. But it's not often that a Montana angler breaks his own record in two consecutive years.

Bainville angler **Vernon Pacovsky**, who set a new white bass record in 1997, accomplished that unusual feat again in 1998. Fishing with a minnow on the Missouri River south of Bainville last September, he landed a white bass weighing 2.25 pounds, besting his 1997 record fish by nearly half a pound. Remarkably, says Pacovsky, in his many years of fishing he has only caught *four* white bass—and every other one was a state record!

Added to the fish records list in 1986, the white bass is a relative newcomer to Montana. Dr. C.J.D. Brown's book, *Fishes of Montana*, published in 1971, does not mention the white bass. A 1996 book, *A Field Guide to Montana Fishes*, by George D. Holton and Howard E. Johnson, lists it as native to eastern Canada, the Great Lakes, and the Mississippi River drainage south to Louisiana and Texas. According to Holton and Johnson, Montana's white bass came up the Missouri River from Lake Sakakawea in North Dakota, where they were planted sometime after construction of Garrison Dam.

Another Montana bass record fell in 1998—the smallmouth. Strangely enough, the smallmouth and white bass are not closely related. The smallmouth is in the sunfish family, while the white bass is in the temperate bass family. **Lonnie Quast** of Billings, fishing in Fort Peck Reservoir's Fourchette Creek Bay last May, caught a 6.20-pound whopper that measured about 20 inches in length. His fish edged the previous record smallmouth caught by Mike Otten in 1996, also in Fourchette Bay, by a tenth of a pound.

Two other Billings anglers garnered fish records in 1998. **Carl Radonski** landed a 0.93-pound yellow bullhead in Tongue River Reservoir, besting the previous mark of 0.84 pounds. Radonski, who also holds the state golden trout record for a fish caught in 1993, is currently the only angler to claim two Montana fish records. And **Ed Ellertson** took a channel catfish weighing 27.17 pounds in Castle Rock Reservoir near Colstrip, eclipsing a 25.89 record from Fort Peck Reservoir that has held since 1984.

Other record fish taken in 1998 included a 40.20-pound carp arrowed in Nelson Reservoir by **Jared Albus** of Hinsdale, and a 0.53-pound Flathead chub caught in the Marias River by **Lyle McKeever** of Loma. Albus' monster carp shaded a 39.77-pounder taken last year with bow and arrow at Eyraud Lakes, while McKeever's chub smashed the previous mark of 0.31 pounds from the Missouri River.

Indeed, fish records are made to be broken. Records for about half of the 56 species included on the list have been broken since 1990. Should you be among a handful of Montana anglers lucky enough to catch a potentially record-setting fish in 1999, keep the following thoughts in mind. FWP requires that you catch the fish legally, and that you have it weighed before witnesses on a government-inspected scale, such as those found in most grocery stores. An FWP employee must positively identify the fish, either through direct examination or with help of a good color photo. Direct examination is much preferred by FWP biologists—in some cases, a photo will not suffice to verify the species. And if possible, have your fish weighed quickly, before it loses precious ounces to dehydration. It could make the difference between a record and a runner-up.—*Dave Books*

Montana's Record-Setting Fish (1998)

Species	Weight	Angler	Year	Location
Arctic grayling	3.21 lbs.	Frederick C. Dahl	1994	Handkerchief Lake
Bigmouth buffalo	57.75 lbs.	Craig D. Grassel	1994	Nelson Reservoir
Black bullhead	2.33 lbs.	Darwin Zempel, Jr.	1994	Lower Flathead River
Black crappie	3.13 lbs.	Al Elser	1973	Tongue River Reservoir
Blue sucker	11.46 lbs.	Doug Askin	1989	Yellowstone River (near Miles City)
Bluegill	2.64 lbs.	Brent Fladmo	1983	Peterson's Stock Dam
Brook trout	9.06 lbs.	John R. Cook	1940	Lower Two Medicine Lake
Brown trout	29.00 lbs.	E.H. "Peck" Bacon	1966	Wade Lake
Bull trout	25.63 lbs.	James Hyer	1916	unknown
Burbot (ling)	17.08 lbs.	Jeff E. Iwen	1989	Missouri River (near Wolf Point)
Carp*	**40.20 lbs.**	**Jared Albus**	**1998**	**Nelson Reservoir**
Channel catfish*	**27.17 lbs.**	**Ed Ellertson**	**1998**	**Castle Rock Reservoir**
Chinook (king salmon)	31.13 lbs.	Carl L. Niles	1991	Fort Peck Reservoir
Cisco	1.46 lbs.	Jim Liebelt	1990	Dredge Cut Trout Pond
Coho salmon	4.88 lbs.	Irven Stohl	1973	Fort Peck Reservoir
Cutthroat trout	16.00 lbs.	William D. Sands	1955	Red Eagle Lake
Flathead chub*	**0.53 lbs.**	**Lyle McKeever**	**1998**	**Marias River**
Freshwater drum	20.44 lbs.	Richard C. Lee	1987	Fort Peck Reservoir
Golden trout	4.90 lbs.	Carl Radonski	1993	Lightning Lake
Goldeye	2.91 lbs.	Vance "Bubba" Kielb	1989	Irrigation canal (west of Malta)
Green sunfish	0.56 lbs.	Roger Fliger	1991	Castle Rock Reservoir
Kokanee (salmon)	5.94 lbs.	Forrest Johnson	1976	Pishkun Reservoir
Lake trout	42.00 lbs.	Dave Larson	1979	Flathead Lake (east shore)
Lake whitefish	10.08 lbs.	Theo Hamby	1995	Lower St. Mary Lake
Largemouth bass	8.16 lbs	Juanita A. Fanning	1984	Milnor Lake
Largescale sucker	5.06 lbs.	Loren Kujawa	1996	Kootenai River
Longnose sucker	3.27 lbs.	Ray Quigley	1988	Marias River
Mottled sculpin	0.03 lbs.	Blain X. Grisak	1997	Sheep Creek (Meagher Co.)
Mountain whitefish	5.09 lbs.	Mervin "Frog" Fenimore	1987	Kootenai River
Northern pike	37.50 lbs.	Lance Moyler	1972	Tongue River Reservoir
Northern squawfish	7.88 lbs.	Darrel Torgrimson	1991	Noxon Rapids Reservoir
Paddlefish	142.50 lbs.	Larry Branstetter	1973	Missouri River
Peamouth	0.64 lbs.	Gordon Stewart	1991	Ashley Creek
Pumpkinseed	0.95 lbs.	Tim Colver	1985	Milnor Lake
Pygmy whitefish	0.16 lbs.	Orlin Iverson	1982	Ashley Lake
Rainbow trout	33.1 lbs.	Jack Housel, Jr.	1997	Kootenai River (David Thompson Bridge)
Rainbow-cutthroat hybrid	30.25 lbs.	Pat Kelly	1982	Ashley Lake
River carpsucker	3.50 lbs.	James Jessen	1991	Yellowstone River near Terry
Rock bass	0.57 lbs.	Don Holzheimer	1989	Tongue River Reservoir
Sauger	8.81 lbs.	Gene Moore	1994	Fort Peck Reservoir
Shorthead redhorse sucker	4.68 lbs.	Ray Quigley	1985	Marias River near Loma
Shortnose gar	3.06 lbs.	John Johnson	1977	Fort Peck dredge cuts
Shovelnose sturgeon	13.72 lbs.	Sidney L. Storm	1986	Missouri River
Smallmouth bass*	**6.20 lbs.**	**Lonnie Quast**	**1998**	**Fort Peck Reservoir**
Smallmouth buffalo	32.63 lbs.	Richard Liesener	1994	Nelson Reservoir
Stonecat	0.54 lbs.	Dale Bjerga	1996	Milk River
Tiger muskellunge	27.00 lbs.	Dan Dupea	1994	Lebo Lake
Tiger trout	4.04 lbs.	Joe Sobczak	1997	Bear Lake
Utah chub	1.81 lbs.	Eugene Bastian	1992	Canyon Ferry Reservoir
Walleye	16.38 lbs.	Steven McMorris	1996	Cooney Reservoir
White bass*	**2.25 lbs.**	**Vernon Pacovsky**	**1998**	**Missouri River**
White crappie	3.68 lbs.	Gene Bassett	1996	Tongue River Reservoir
White sturgeon	96.00 lbs.	Herb Stout	1968	Kootenai River
White sucker	5.33 lbs.	Fred Perry	1983	Nelson Reservoir
Yellow bullhead*	**0.93 lbs.**	**Carl Radonski**	**1998**	**Tongue River Reservoir**
Yellow perch	2.37 lbs.	Vernon Schmid	1988	Ashley Lake

***New Montana record for 1998**

MILES CITY SQUIRRELS STARTED OUT IN JAIL

I enjoyed your article on squirrels in the November/December issue, but I wanted to correct a statement made on page 10 that "gray squirrels were released in Great Falls, Harlowton, and Miles City in the 1960s."

Actually, gray squirrels were released in 1927 in Miles City. Old-timers recall that some of the earlier residents of the town, especially a group from Missouri, missed squirrels. In 1926 the Custer Rod and Gun Club arranged to secure squirrels from Lincoln Park in Chicago.

The squirrels arrived by train in December, not a good time to turn a dozen squirrels loose in a strange area, so they were placed in the city jail's "drunk tank" and kept there all winter. Some of the older residents of the city remember as children taking nuts to the city jail that winter to feed the squirrels.

In the spring the squirrels were released in the city park where during the summer of 1927 they found hollow trees or built leaf nests. During the next winter the city engineer was instructed to feed the squirrels and the city council urged residents to help out, and to protect the squirrels. During the first 10 years those 12 squirrels increased to around 150 squirrels.

Miles Citians have continued to feed their squirrels, although in recent years the squirrels have become so numerous they cause problems for gardeners and homeowners.—*Pat Gudmundson, Miles City*

REMEMBERING ORVILLE LEWIS

I want to tell you how much I appreciated your article, "Remembering Orville Lewis" (September/October). I grew up with Orv in Glasgow, Montana. On our honeymoon my wife, Marge, and I dropped in on Orv and Alida when he was a new game warden in Dillon. Orv took me fishing, by canoe, down the Beaverhead River—it was great. I knew at that time he would be a great game warden for he made this poor teacher buy a license for that one fishing trip!

Thanks for a great magazine.—*John Knight, Perham, Minnesota*

GAME FARM ADMINISTRATION COSTLY

I wonder what your reader response would be had you broken down your year-end fiscal report to reflect the cost of game farm administration (March/April, FWP Annual Report). My sources say that you spent $251,000, not including legal/court costs, which average about $30,000 a year, and collected $7,650 in fees from the "farmers"(?)! That is a lot of money spent on an activity that has *nothing* to do with hunting/fishing. In fact, if a larger, tougher handle is not found to deal with this increasing menace, our hunting of native game species (elk and deer) is going to be severely impacted.

Your wildlife management budget is so tight that the Ravalli County Fish & Wildlife Association had to underwrite the aerial survey for a mountain goat census that hadn't been done for six years—with surprising results I might add. You should look to setting some new and different priorities and quit patting yourself on the back so much.

Having said that, you should be commended for your efforts to increase and maintain hunter access to private property. I think the block management program is great!—*John M. Richards, Hamilton*

You are correct. FWP did spend just over $251,000 in fiscal year 1998, excluding the cost for some supplemental environmental assessments on the administration of the game farm program. Our revenues collected from game farms for the same year were $12,750.

The expenditures that we make as an agency are authorized by the Montana Legislature. A number of bills were being considered as we went to press addressing both administration and funding of game farms in Montana.—Editor

TRAPPING AND BIOLOGY 101

The letter in the March/April issue putting you down for the wonderful article "Call of the Wild" (Nov./Dec.) leaves me nauseous. This is a classic example of rampant bigotry and prejudice incited by animal-rights fanatics. These groups go to extremes to bury truth and fact, even to the point of outright lying. And, they are into the wallets of the uneducated public daily, siphoning off millions of dollars, little, if any, of which benefits wildlife in any form.

Worst of all, these vocal minorities have become masters of brain-washing the unsuspecting urban dwellers and state legislatures in the bargain. Every last one of them should repeat Biology 101 until they completely understand Mother Nature. This capricious entity is not kind and gentle, nor is she "civilized." All species in nature survive at the expense of other species and no amount of weeping and whining will ever change that.

Millions enjoy the recreation of hunting, angling, and trapping, which is assiduously regulated by enlightened fish and game departments nationwide. Hunters, anglers, and trappers have put more money into supporting state wildlife programs than any of the fanatics—we've paid our dues in spades. If all of this came to a halt, we could kiss our entire wildlife resource goodbye.

Those of us who were raised with these legacies have the right to enjoy them and not be told how to live by narrow-minded individuals who ignore fact and truth and who are, in truth, committing social espionage with their diatribe and distortions. The bottom line is that these poor souls are the real victims.—*C.R. Bonney, Grants Pass, Oregon*

MONTANA OUTDOORS

MARKET

Henley

This preshrunk, 100% cotton, long-sleeve shirt can be worn alone or as a base for layering. Available in *natural, leaf,* and *lake (shown),* with embroidered mule deer, in sizes M, L, XL. **ITEM #1301-6 $29.95**

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blue *natural*

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With contrasting collar, cuffs, and placket, this 100% combed cotton pique golf shirt is available in *forest green/wine/navy; wine/forest/navy (shown);* and *jade/concord/royal.* Comes with embroidered Montana Outdoors logo; available in sizes M, L, XL.
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forest green/wine/navy *wine/forest/navy* *jade/concord/royal*

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ash *sage* *straw* *forest green*

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dark green/khaki *dark caramel/dark green*

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dark green *charcoal* *denim* *two-tone*

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Contributors

Yerk

For decades, Canyon Ferry Reservoir has been one of Montana's most popular angling destinations. Rainbow trout are the major draw in summer, and yellow perch in winter. But the fishery is changing, says **Dave Yerk**, an FWP fisheries technician responsible for monitoring fish populations at Canyon Ferry. A single walleye showed up in FWP's standard gill net survey in 1989, the first in 34 years of sampling; now, gill net catch rates of walleye in Canyon Ferry exceed those in noted walleye fisheries like Fort Peck Reservoir. For an in-depth analysis of the changing scene at Canyon Ferry, Hauser, and Holter reservoirs, turn to "Where Walleye Meet the Rockies" on page 2. Yerk, who is completing a master's degree on the Canyon Ferry fishery, works in FWP's Helena Area Resource Office.

Thompson

Inheritances come in all shapes and sizes, notes **Mike Thompson**, from gun-shy golden retrievers to pink ceramic swans. But there are such things as wild inheritances, and passing them on can benefit all Montanans. On June 12, the Blackfoot-Clearwater Wildlife Management Area will celebrate its fiftieth anniversary (p. 15). As part of reaching that milestone, FWP—with help from the Rocky Mountain Elk Foundation, the Five Valleys Land Trust, Plum Creek Timber Company, and the Montana Department of Natural Resources and Conservation—is striving to acquire 7,800 acres of vital deer and elk winter range in the heart of the WMA. Hundreds of deer and elk from the Bob Marshall Wilderness winter on the Blackfoot-Clearwater, says Thompson, so "inheriting and protecting the WMA is inheriting and protecting the Bob." Thompson is a wildlife biologist stationed at FWP's Region 2 office in Missoula.

Fraley

In his article, "Promise" (p. 20), **John Fraley** points out that the Thompson and Fisher river drainages contain some of the finest fish and wildlife habitat in northwestern Montana. The area supports moose, deer, elk, bighorn sheep, black and grizzly bears, wolves, numerous furbearers, and a host of nongame species. Both river drainages provide excellent fishing, and some waters harbor bull trout and rare native redband rainbow trout. To maintain public access to about 170,000 acres of privately owned land in this area, says Fraley, FWP and the Rocky Mountain Elk Foundation are working on a conservation easement with Plum Creek Timber Company. The agreement would allow Plum Creek to continue managing its timberlands while guaranteeing public access for recreation and restricting future development. A good portion of funding for the agreement would come from a wildlife mitigation fund set up by the Bonneville Power Administration to replace wildlife habitat lost to Libby and Hungry Horse dams. Fraley is FWP's regional information officer in Kalispell.

For more than two decades, lack of funding prevented improvements at Ulm Pishkun State Park southwest of Great Falls. Yet, says **Bruce Auchly**, this pishkun—a cliff where prehistoric peoples lured thousands of bison to their death—has great historical and cultural significance. Archaeological digs by Montana State University researchers in 1992 and 1993 did much to enhance understanding of the park's cultural deposits and spurred interest in protecting its resources. With help and support from Great Falls tourism interests, historical groups, and the Native American community, FWP eventually secured the funding necessary to build a new visitor center. June 5 will mark the grand opening of this new interpretive center, which features an exhibit hall, classroom, and bookstore (p. 24). "The park can now reach its full potential as an educational facility, a tourist attraction, and a bridge spanning two cultures," says Auchly, FWP's information officer in Great Falls.

MO thanks the following photographers for their contributions to this issue: **Steven Akre**, Ulm; **Denver Bryan** and **Dusan Smetana**, Bozeman; **Steve Ellis** and **Neal & Mary Jane Mishler**, Great Falls; **John R. Ford**, Land O' Lakes, WI; **Chuck Haney**, Whitefish; **Donald M. Jones**, Troy; **John Lambing**, Helena; **Kerry Nickou**, Browning; **Conrad Rowe**, Seeley Lake; **W. Steve Sherman**, Dillon; **Paul Updike**, Townsend; and **George Wuerthner**, Livingston. Thanks also to the following employees who work for the department: **Bruce Auchly**, Great Falls; **Dan Curtin** and **Bill Thomas**, Missoula; **Brad Flickinger**, Lewistown; and **Dave Yerk**, Helena.

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